Notice of Intent to Adopt a Mitigated Negative Declaration

Meadow Pointe Water System/Upper Lake County Water District Consolidation Project

Date of Preparation: July 24, 2026

Lead Agency: Upper Lake County Water District

Project Description: The project would consolidate the existing Meadow Pointe Water System into the Upper Lake County Water District. Meadow Pointe's water source is contaminated with MTBE and has been ordered by the State Water Resources Control Board Division of Drinking Water to find a new water source. Improvements to the Upper Lake water system would be made to provide service to Meadow Pointe via a master meter. The Meadow Pointe distribution system would be replaced. Additionally, residents along Bridge Arbor North Road would be provided with water service as their wells are similarly contaminated. The project would include LAFCO action to bring new water service areas into the Upper Lake water service area and sphere of influence.

Project Location: Upper Lake County Water District, Lake County, CA

Findings

Based on the Initial Study dated July 24, 2026, the Upper Lake County Water District has determined that:

1. With the incorporation of mitigation measures, this project does not have the potential to degrade the quality of the environment, nor to curtail the diversity of the environment.
2. This project will not have a detrimental effect upon either short-term or long-term environmental goals.
3. This project will not have impacts that are cumulatively considerable.
4. This project will not have environmental impacts that will cause substantial adverse effects on human beings, either directly or indirectly.
5. Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A Mitigated Negative Declaration has been prepared.

Public Review Period: July 24, 2026 to August 24, 2026

Public Review: The Initial Study is available (beginning July 24, 2026) for public review at the Upper Lake County Water District, 9471 Main Street, Upper Lake, CA. All documents referenced in the Initial Study are available at the office of Brelje & Race, 475 Aviation Blvd. Suite 120, Santa Rosa. The public is invited to submit written comments regarding the environmental findings and the proposed Mitigated Negative Declaration determination to: Upper Lake County Water District, PO Box 847, Upper Lake, CA 95485, for receipt by 5:00 pm, Monday, August 24, 2026. Persons commenting are advised to raise all pertinent issues during the public comment period. If action taken by the Upper Lake County Water District is challenged in court, the legal challenge may be limited to those issues raised by persons during the public comment period.

Where to Submit Comments

Upper Lake County Water District

PO Box 847

Upper Lake, CA 95485

Contact Person: Rachelle Henry, General Manager, (707) 275-3232

The Mitigated Negative Declaration has been prepared in compliance with the provisions of the California Environmental Quality Act.

MITIGATED NEGATIVE DECLARATION

Project Title: Meadow Pointe Water System/Upper Lake County Water District Consolidation

Date of Preparation: July 24, 2026

Lead Agency: Upper Lake County Water District

Project Description: The project would consolidate the existing Meadow Pointe Water System into the Upper Lake County Water District. Meadow Pointe's water source is contaminated with MTBE and has been ordered by the State Water Resources Control Board Division of Drinking Water to find a new water source. Improvements to the Upper Lake water system would be made to provide service to Meadow Pointe via a master meter. The Meadow Pointe distribution system would be replaced. Additionally, residents along Bridge Arbor North Road would be provided with water service as their wells are similarly contaminated. The project would include LAFCO action to bring new water service areas into the Upper Lake water service area and sphere of influence.

Project Location: Upper Lake County Water District, Lake County, CA

General Plan: Designation varies, primarily in roadways or public utility easements

Zoning: Designation varies, primarily in roadways or public utility easements

Findings:

1. With the incorporation of mitigation measures, this project does not have the potential to degrade the quality of the environment, nor to curtail the diversity of the environment.
2. This project will not have a detrimental effect upon either short-term or long-term environmental goals.
3. This project will not have impacts that are cumulatively considerable.
4. This project will not have environmental impacts that will cause substantial adverse effects on human beings, either directly or indirectly.

- ○ The proposed project could not have a significant effect on the environment and a Negative Declaration will be prepared.
- ● Although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A Mitigated Negative Declaration has been prepared.

Public Review Period: July 24, 2026 to August 24, 2026

Mitigation Measures: See Initial Study

Where to Submit Comments: Upper Lake County Water District
PO Box 847
Upper Lake, CA 95485

Contact Person: Rachelle Henry, General Manager
(707) 275-3232

Attachment: Initial Study

MEADOW POINTE WATER SYSTEM/UPPER LAKE COUNTY WATER DISTRICT CONSOLIDATION

Upper Lake, Lake County, California

Initial Study

July 2026

Prepared for:
Upper Lake County Water District
P.O. Box 847
Upper Lake, CA 95485

Prepared by:
Brelje & Race Engineers
475 Aviation Blvd., Suite 120
Santa Rosa CA 95403
707/576-1322

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Appendices

Appendix A: Mitigation Monitoring & Reporting Plan

PROJECT DATA

Project Title:	Meadow Pointe Water System/Upper Lake County Water District Consolidation
Lead Agency:	Upper Lake County Water District PO Box 847 Upper Lake, CA 95485
Contact Person:	Rachelle Henry, General Manager (707) 275-3232
Project Location:	Upper Lake, Lake County, CA
General Plan Designation:	Designation varies, primarily in roadways or public utility easements
Zoning:	Designation varies, primarily in roadways or public utility easements

INTRODUCTION

The purpose of this Initial Study is to provide the Lead Agency, the Upper Lake County Water District (District), with an assessment of relevant environmental information associated with implementation of the proposed project in order to determine whether a Negative Declaration, Mitigated Negative Declaration or an Environmental Impact Report (EIR) will be required for the Meadow Pointe Water System/Upper Lake County Water District Consolidation Project (project). This environmental evaluation is intended to fully inform the Lead Agency, Responsible Agencies, other interested agencies, and the public of the proposed plan and associated environmental impacts. This Initial Study has been prepared in conformance with the requirements of §15063 of the 2025 California Environmental Quality Act (CEQA) Guidelines.

If the Lead Agency determines that there is no substantial evidence that the project may cause a significant effect on the environment, then a Negative Declaration may be prepared. A Negative Declaration may include conditions of approval to avoid or reduce potential impacts. However, if the Initial Study determines that the project may cause an unavoidable or unknown significant effect on the environment, the Lead Agency must prepare an EIR.

The Initial Study process also enables the Lead Agency to modify a project, mitigating adverse effects before an EIR is prepared, thereby enabling the project to move forward under a Mitigated Negative Declaration. This facilitates the environmental evaluation portion of the project development process and eliminates unnecessary EIRs.

PROJECT PURPOSE AND BACKGROUND

The California State Water Board (Water Board), Division of Drinking Water (DDW), identified critical deficiencies with the Meadow Pointe Water System (Meadow Pointe), formerly known as the Cal 20 Water System, located in the unincorporated community of Upper Lake, Lake County, California (Figure 1). Meadow Pointe's water sources are contaminated with methyl tert-butyl ether (MTBE) and tertiary butyl alcohol (TBA), gasoline additives associated with nearby leaking underground fuel storage tanks. DDW, through an Inspection Findings[1] letter dated December 15, 2017, directed Meadow Pointe to find a new water source not contaminated with MTBE and TBA. The Inspection Findings letter stated that, "an alternative safe potable water source that meets all state and federal requirements must supply the system within the next five years." California State University, Sacramento - Office of Water Programs (OWP) was retained by Water Board's Division of Financial Assistance (DFA) to provide Technical Assistance (TA) support, including overall project management, for the project.

A feasibility analysis and report (February 2022) was completed to assess the viability of consolidating the Meadow Pointe water system with the neighboring District's water system, and to perform preliminary analyses and engineering design leading to the preparation of a Preliminary Engineering Report (PER) to support a funding application under DFA's Safe Drinking Water Program.

Throughout the development of the feasibility study, PER and preliminary design, monthly progress meetings have been attended by multiple stakeholders. Stakeholders have included: Meadow Pointe, the District, Lake County Local Agency Formation Commission (LAFCO), DFA, DDW and OWP. Brelje & Race staff became

[1] Inspection Findings for Cal 20 Village and Meadow Pointe Park, PWS No. 1700595 from Sheri Miller, District Engineer, State Water Resources Control Board, Division of Drinking Water. December 15, 2017.

involved in the stakeholder meetings in October 2021 as the consultant preparing the studies, environmental review, LAFCO application, and project plans.

With DDW's directive for a new source, the most apparent alternative for compliance involved abandoning Meadow Pointe's existing well sources and consolidating with the District. Meadow Pointe, under previous ownership, unsuccessfully pursued consolidation with the District for many years. The feasibility study found that the best overall solution for complying with the directive would indeed be to consolidate the Meadow Pointe system with the District.

The adjacent single-family residential parcels along Bridge Arbor North Road (Bridge Arbor) have similarly MTBE-impacted wells and were also included in the feasibility study. The study found that service through consolidation with the District was the most viable alternative to their continued use of contaminated wells.

The overall project purpose is to rectify the contaminated wells used by Meadow Pointe water system and parcels along Bridge Arbor and provide them with clean drinking water. The objective is to meet the project purpose without negatively impacting the District's existing customers.

Based on the feasibility study and direction from DFA, a PER was developed for the project and completed in January 2024. The PER assessed four primary alternatives, briefly described below:

- Alternative 1 – No Project
- Alternative 2 – Meadow Pointe develops new source(s) to replace the contaminated well(s)
- Alternative 3 – Consolidation of Meadow Pointe with the District through a master metering arrangement; Meadow Pointe owns and continues to maintain its water distribution system
- Alternative 4 – Consolidation of Meadow Pointe with the District with the District assuming ownership and ongoing maintenance of the Meadow Pointe distribution system

Alternatives 1 was developed to meet the basic direction from DDW requiring Meadow Pointe to obtain a new domestic water source while Alternatives 3 and 4 would provide solutions that benefit both water systems by also remedying other existing deficiencies present in each system. Based on the alternatives analysis in the PER, Alternative 4 was the recommended project as it would provide the greatest overall benefit and satisfy the objectives of both the District and the owners of the Meadow Pointe system as well as requirements of the DDW directive. The addition of Bridge Arbor residences was also recommended.

Subsequent to completion of the PER, the District determined that its construction and ownership of the water facilities within Meadow Pointe would be disadvantageous to the District and requested an addendum be prepared to reassess Alternative 3 utilizing a master meter to serve Meadow Pointe. Upon agreement by the stakeholders, an Addendum was prepared in January 2025 to explore three potential Meadow Pointe distribution system alternatives using master metering scenarios similar to those contained in Alternative 3 of the PER. Alternative 3b was selected as the preferred project by the stakeholders and is the project assessed herein and described in the Project Description section of this document.

The project will also require a LAFCO action to amend the District's water service area and sphere of influence.

PROJECT SETTING

The project involves two water systems located in the unincorporated community of Upper Lake, Lake County. The project's regional location is shown on Figure 1 and the existing water system boundaries are shown on Figure 2.

A description of the two existing water systems is provided below.

MEADOW POINTE WATER SYSTEM OVERVIEW

The Meadow Pointe water system is a community water system situated on the south side of Highway 20 in the unincorporated community of Upper Lake. The water system was, until recently, owned and operated by Noble Family LLC. The parcel that includes the mobile home park and the water system facilities (APN 004-010-47) was recently purchased by Meadow Pointe LLC, a Harmony Communities Company. The Meadow Pointe water system is now operated by a contract operator.

The Meadow Pointe system serves approximately 175 people through 93 service connections and is regulated by DDW under permit number CA1700595. There are 91 metered and 2 unmetered service connections. The service connections include 86 residential and 7 industrial customers. The industrial customers include Assessor Parcel Numbers (APN) 004-010-49 and 004-010-48 and are now under separate ownership from the Meadow Pointe water system. Note that while most services are metered, the meters are not read.

Meadow Pointe's first well was drilled in 1966 and served a single residence initially. The mobile home park added 85 residential spaces, all with metered connections, circa 1990. A separate well was installed (date unknown) for irrigation purposes. The irrigation system, separate from the drinking water system, was then later combined with a new fire system, installed in 2003. The Meadow Pointe boundary is shown on Figure 2.

There have been ten enforcement actions issued by DDW, as reported by the Sanitary Survey Report, based on their inspection performed on October 12th, 2020. These actions are in addition to the MTBE source contamination issue. The survey showed that the Meadow Pointe system has difficulty meeting standards and is often non-compliant with current standards. Record keeping was determined to be inaccurate and was not performed regularly.

UPPER LAKE COUNTY WATER DISTRICT WATER SYSTEM OVERVIEW

The District is a community water system situated adjacent to Meadow Pointe on the north side of Highway 20. The water system serves approximately 1,085 people through 401 metered service connections. The District boundary and its proximity to Meadow Pointe are shown in Figure 2.

The District was created in 1965 as the County Water Works District #6 and was later renamed. The District's original facilities were constructed in 1966 and included a single well with a large hydro-pneumatic tank, located at the intersection of Mendenhall Avenue and Main Street. The second well was added circa 1978 immediately across Mendenhall from Well 1 but did not include a hydro-pneumatic tank. An approximately 120,000 gallon bolted water storage tank and long 8-inch transmission main were added to the system in 1975. An identical tank was added in 1985 on the same parcel. The tanks are located on a hill east of the intersection of Old Lucerne Rd. and Hwy 20. An approximately 200,000 gallon welded tank was added on a parcel adjacent to the two other tanks in 2000, and the two older tanks were replaced by the District in

2011 with a single, 500,000 bolted steel tank. The hydro-pneumatic tank was removed from service after construction of the first tank but was never removed.

The District water system has no outstanding compliance issues and has generally remained in good standing in terms of compliance with DDW. The District has been issued one recent enforcement action due to missing routine nitrate sampling in 2019. The District completed testing for nitrate in 2020. Their water sources are generally high-quality and do not require filtration. A sodium hypochlorite injection system for disinfection is the sole form of treatment.

The District has previously conducted extensive engineering planning for the potential interconnect and consolidation of the Meadow Pointe system. The previous analyses were prepared by the District's Engineer, Russ Greenlaw, P.E., and showed that upgrades to the District's distribution system prior to connection of Meadow Pointe would be necessary to ensure sufficient pressure and flow throughout the system. Those analyses indicated that installation of approximately 6,700 LF of new 8-inch and 12-inch piping would be necessary. The District identified additional deficiencies, including: a) storage not being adequate for additional users (resolved by District in 2011); b) inability to meet fire flows; and c) lack of redundancy between the town grid and the tanks. All of these issues were identified to the District by the District Engineer a decade before State involvement in technical matters or the PER.

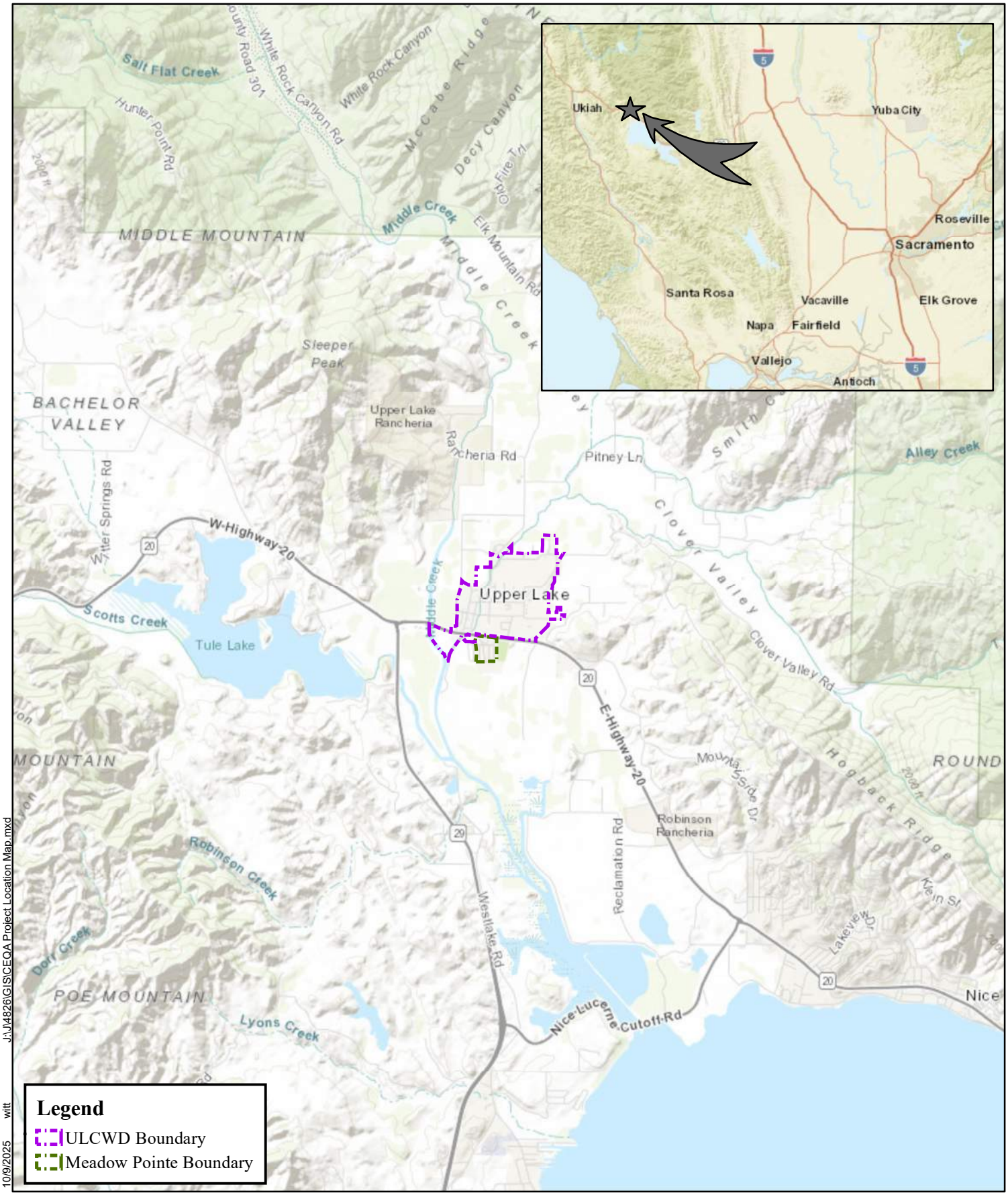
EXISTING WATER SYSTEMS

This section provides a description of the existing Meadow Pointe and District water systems. Meadow Pointe is within the District's exiting sphere of influence but outside of the District's service area. Annexation of the parcels into the service area and amendment of the sphere of influence through LAFCO action would be required. Because the Meadow Pointe water system will be abandoned by the project, only a brief description is provided here. Additional information is available in the PER.

Meadow Pointe Water System

The Meadow Pointe water system began operations in the 1970s. Various system improvements have occurred over the years, however, the original potable distribution system has remained relatively unchanged. The system currently produces water that meets drinking water standards, although it is difficult and expensive to maintain and has incurred multiple enforcement actions from DDW within recent years.

Meadow Pointe's maximum water demand day was in September 2011, with a MDD of 67,597 gallons, or 46.9 gpm. Each of the two wells independently fulfill the MDD demands for supply source capacity. MP Well 1 currently operates at 88 gpm and MP Well 2 operates at 58 gpm. Combined total capacity is approximately 146 gpm. Since the system only has 35,000 gallons of storage capacity, it cannot meet the MDD requirements from its storage tanks.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

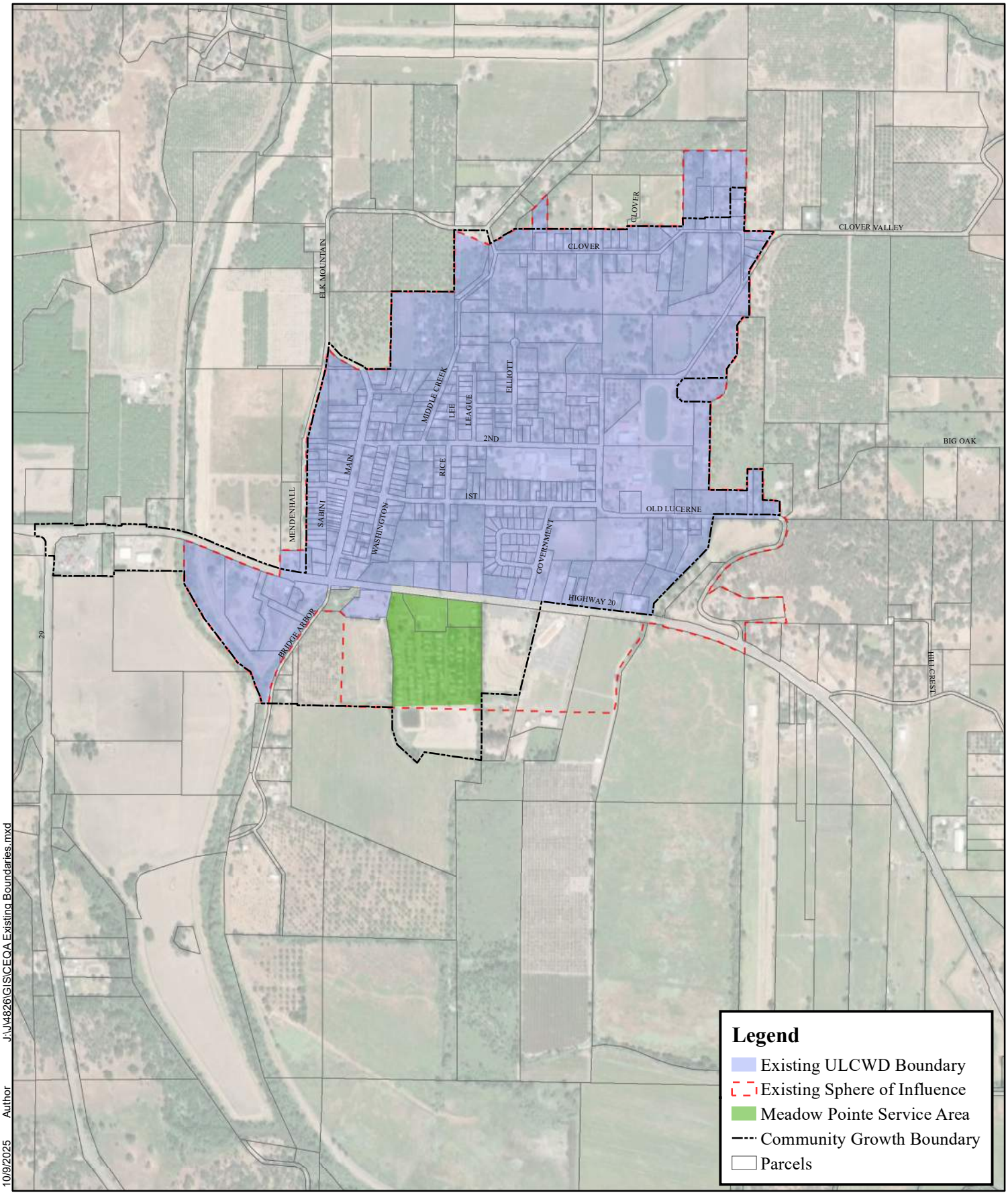
NORTH

0 0.25 0.5 1 Miles

Brelje & Race
CONSULTING ENGINEERS
415 Aviation Blvd., Suite 120, Santa Rosa, CA 95403

FIGURE 1
LOCATION MAP

MEADOW POINTE/ULCWD CONSOLIDATION
OCTOBER 2025



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

NORTH

0 295 590 1,180 Feet

Brelje & Race CONSULTING ENGINEERS
475 Aviation Blvd., Suite 120, Santa Rosa, CA 95403

FIGURE 2

EXISTING BOUNDARIES

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

A current inventory of major system components, including the age and apparent qualitative condition of each component is shown below:

System Component	Year Installed	Quantity	Condition
MP Well 1	1966	1	Poor
MP Well 2	1992	1	Good
4" Transmission Mains	Circa 2003	2400 ft.	Fair
2" Distribution Mains	Circa 1966	Unknown	Poor
Service Laterals and Connections	Circa 1966	Unknown	Poor
Meters	Unknown	85	Fair
Manganese Filter	2010	1	Unknown
Activated Carbon Filters	2001	6	Good
Distribution Pumps	Circa 2017 & 2020	2	Poor
Backup Generator	Circa 2008	1	Fair/Poor
Redwood Storage Tanks	1966	4	Fair
Steel Backwash Recycle Storage Tanks	2010	2	Fair
Polyethylene Storage Tank	2012	1	Fair
Steel Backwash Supply Storage Tank	Unknown	1	Fair
Treatment Building	Unknown	1	Fair

Meadow Pointe's two drinking water wells are currently contaminated with MTBE and TBA, gasoline additives that entered the aquifer from a nearby gas station. Only Well No. 1 is above the EPA set MCL for MTBE. The State Water Resources Control Board opened the case regarding the LUSTs at the gas station in 1998 and remediation began in 2013. MTBE poses a serious health risk if consumed, while TBA is suspected of posing adverse health risks. Granular activated carbon filters (GAC) are used to reduce the concentration of both MTBE and TBA to levels in compliance with Federal and State drinking water standards. The GAC media in this system needs replacing approximately once every three to four years. There are a total of six GAC media filter modules, and only three filters are used at a time. The GAC currently in use should last another several years.

The initial MTBE contamination tests were performed at Woody's gas station in 1998. The test results showed various chemical components of gasoline and motor oil, including MTBE, to be present in one or more of the samples used for testing (EnviroNet Consulting 2001). Although the USTs have since been lined to stop leakage, the previous groundwater contamination has affected nearby wells including the two drinking water wells at Meadow Pointe.

MP Well 1 has a 7-ft. annular seal that does not meet Title 22 standards (50 feet required). The well was scheduled to be removed from operation by September 15, 2015, by order of DDW after the 2013 annual inspection. The well continues to remain in operation and new orders issued December 15, 2017, extended the allowable continued operation of the well until December 2022.

The existing Meadow Pointe water distribution system is aging, constructed in the 1960s, and many of the small diameter water mains run underneath the mobile home units making access for repairs very difficult. The service connections and meters are located in the backyard of each mobile unit. The location of the service laterals and meters makes it difficult to read the meters and to gain access for repairs.

Upper Lake County Water District Water System

DISTRICT WATER DEMANDS

The California Fire Code sets the required fire flows for residential buildings based on construction materials, building footprint in square feet, and if the building contains an automatic sprinkler system. For residential buildings having footprints less than 3,600 square feet and no automatic sprinkler system (the vast majority in Upper Lake), the minimum targeted fire flow is 1,000 gpm for one hour duration or 60,000 gallons of total storage capacity. If the residential buildings of this size have automatic sprinkler systems, the minimum flow can be reduced to 500 gpm for 30 minutes duration, for a total of 15,000 gallons of storage capacity. Since many of the residences that are served by the District are not equipped with automatic sprinklers, the minimum fire flow is 1,000 gpm and 60,000 gallons of storage capacity. Commercial area fire flows and for schools or similar structures without fire sprinkler systems (such as in Upper Lake) vary. The downtown commercial area has an established targeted fire flow of 2,000 gpm from two adjacent fire hydrants for a two-hour duration. At the schools, a minimum targeted fire flow of 1,500 gpm for two hours is desirable (ULCWD Master Plan).

Existing storage meets operational and fire storage requirements. Target fire flows have been modeled and found inadequate in the distribution system, particularly in the downtown core area. These findings have also been corroborated by District staff.

DISTRICT WATER SYSTEM INVENTORY

The water treatment and distribution system are comprised of two wells, a chlorination system for each well, two storage tanks, transmission and distribution piping ranging in size from 1-inch to 8-inch diameter, 132 valves, 42 hydrants, and 28 backflow prevention devices. Distribution piping is largely composed of AC, however there are some C900 PVC pipes installed.

Storage is comprised of one 500,000-gallon bolted steel tank and one 212,000-gallon welded steel tank.

DISTRICT WATER SOURCE AND QUALITY

The District has two supply wells situated relatively close to each other. Water is drawn from the Upper Lake Valley Basin, a non-adjudicated basin (Department of Water Resources 2021). District Well 1 was drilled in approximately 1966 using a 12-inch steel casing, is 130 feet deep with perforations between 72-122 feet deep. The annular seal on District Well 1 is 52 feet deep and the submersible well pump capacity averaged 309 gpm in May 2020. The pump capacity drops as low as 250 gpm depending on season.

District Well 2 was drilled in 1981 using a 12-inch casing, is 145 feet deep with perforations from 75-135 feet deep. The screen type changes from slotted to perforated at 115 feet depth. The annular seal for Well 2 is 50 feet deep and the submersible well pump capacity averages 307 gpm but also drops to approximately 250 gpm depending on the season. Emergency power is provided at Well 2.

The District's water quality is excellent.

DISTRICT TREATMENT

The only form of treatment is chlorine disinfection. Each of the wells has a dedicated sodium hypochlorite injection system with 40 gpd pumps injecting a 1.4 percent sodium hypochlorite solution. The injected

solution is diluted at an 8:1 ratio. A residual of approximately 0.2-0.5 mg/l is maintained throughout the distribution system.

DISTRICT STORAGE

Storage is provided by two tanks located just southeast of the service area. They include a 212,000-gallon welded steel storage tank installed in 2000 and a 500,000-gallon bolted steel storage tank built in 2012. The 500,000-gallon storage tank was installed to replace two smaller dilapidated and leaking storage tanks. The District indicates the tank was sized in preparation for the inclusion of the Meadow Pointe water system. The 500,000-gallon tank is on a gravel foundation while the 212,000-gallon storage tank is on a concrete foundation with seismic anchors.

Both storage tanks are situated on a small hill removed from most of the service connections in the service area. The relatively small-diameter transmission main between the tank site and the main distribution system contributes to high head losses. The tank interiors are inspected regularly and cleaned every three years.

DISTRICT DISTRIBUTION

The distribution system is composed of varying pipe diameters ranging in size from two to eight inches. Most pipes are asbestos cement (AC). C900 PVC pipe is also used, primarily in newer areas of the distribution system or for repaired sections. System pressures range between 72 and 77 psi. There are 132 valves and 45 hydrants which are flushed and exercised annually.

In 2018, about 16 percent of the water produced was lost in the distribution system from flushing, leaks, fire flow, and/or unmetered use. There are 28 backflow prevention devices used to stop potential cross-connections. There are no booster pumps in the system.

DISTRICT CONTROLS AND MONITORING

The District monitors and controls well production and tank levels using a Xio system. The system monitors tank levels and provides either automatic or manual start/stop control of the well pumps based on tank level. Automatic pump control includes 'time-of-use' operations for best power rates. The emergency power supply at Well 2 also provides emergency power to the Xio system.

NOTED DISTRICT DEFICIENCIES

There were six deficiencies identified during the June 2020 Sanitary Survey performed by DDW, listed below.

1. District Well 1 and Well 2 need to be bacteriologically monitored quarterly.
2. Proper protection needs to be installed on all the sources, such as a screen or check valve for all overflow piping.
3. Well vents should be installed to extend the life of the wells.
4. The hose bib on Well 2 is used for sampling and should be replaced by a threadless spigot or have the threads removed.
5. Updated Emergency Notification and Bacteriological Sampling Site Plans should be submitted.
6. The Emergency Response Plan should continue to be updated according to the America's Water Infrastructure Act.

There are two additional system deficiencies not reported in the Sanitary Survey but identified in the PER, including the inability to meet standard fire flow targets and the lack of redundancy in the mains between the distribution system and the storage tanks. Discussion with the District Manager has indicated several other relatively minor deficiencies.

- The service laterals on the water main in Rice Street are increasingly leaking; likely due to nonstandard service lateral connections and poor compaction that occurred when the wastewater collection system was installed.
- The well pump in Well 2 is nearing the end of its service life.
- The coatings on the 212,000 gallon welded tank are beginning to fail.
- Well 1 lacks emergency power.

Bridge Arbor North Road Residential Area

There are nine parcels with 13 residences along the Bridge Arbor adjacent to the Meadow Pointe water system. They have been included in the project studies as the residences have wells that are either already contaminated from the same MTBE plume or are in danger of becoming contaminated. It was also thought that extending a pipeline from any new piping planned for the Meadow Pointe system consolidation project would be a relatively low-cost addition. There is already a water main extending across Highway 20 in the vicinity of Bridge Arbor that would require less new piping to connect to the District than an extension from Meadow Pointe. It is believed the existing crossing is 6-inch based on excavation near the valve.

The Bridge Arbor residences are not located within the District's boundaries nor within the existing Sphere of Influence (SOI). The developed portions of the Meadow Pointe Mobile Park are already within the District's SOI. Therefore, to serve the Bridge Arbor parcels, annexation through the LAFCO process will be needed. Providing the Bridge Arbor residents a safer source of supply is also part of the recommended project and additionally provides residents the benefit of being able to participate in the public water system processes and adds fire protection.

PROJECT ALTERNATIVES

Several alternatives were identified in the PER for providing Meadow Pointe with an alternative source of clean drinking water. The No Project alternative was presented to illustrate what could occur if no project is implemented. However, it specifically does not meet DDW's directive to provide a new water source. Three primary alternatives to meet DDW's directive were presented, each including minor sub alternatives. Alternatives examined in the PER included:

- Alternative 1 – No Project
- Alternative 2 – Meadow Pointe develops new source(s) to replace the contaminated well(s)
- Alternative 3 – Consolidation of Meadow Pointe with the District through a master metering arrangement; Meadow Pointe owns and continues to maintain its water distribution system
- Alternative 4 – Consolidation of Meadow Pointe with the District with the District assuming ownership and ongoing maintenance of the Meadow Pointe distribution system

Alternative 2 was developed to meet the basic direction from DDW requiring Meadow Pointe to obtain a new domestic water source while Alternatives 3 and 4 provide solutions that benefit both water systems by also remedying other existing deficiencies present in each system. The existing deficiencies would not be resolved, and may actually be exacerbated, by simply intertying the systems. The existing fire flow deficiencies

within the District system would be further impaired by the addition of Meadow Pointe and the existing vulnerability of not having redundant mains to the District's storage tanks would expose Meadow Pointe residents to the same vulnerability.

A thorough description of project alternatives is provided in the PER and is not reproduced here. It was determined through multiple stakeholder meetings that Alternative 3 would be the preferred project and moved on to environmental analysis and design.

DISTRICT WATER SYSTEM EVALUATION

Alternatives 3 and 4 would involve the consolidation of the Meadow Pointe water system with the District system. The PER included consideration of several issues (e.g. supply capacity, storage capacity, staffing, transmission system limitations, and physical infrastructure improvements to affect a connection, etc.) prior to recommending consolidation. The District's water system has known existing deficiencies that will also require remediation through various improvements prior to entering an agreement to either serve the Meadow Pointe water system.

DISTRICT WATER SUPPLY CONSIDERATIONS

The District has a maximum daily demand (MDD) of 414,000 gpd (288 gpm) as reported in DDW's Sanitary Survey Inspection Reports. The Meadow Pointe MDD is reported as 67,567 gpd (47 gpm), however, the theoretical maximum is projected to be 73,260 gpd (51 gpm). While there are only 81 connections currently in the mobile park, the property was once permitted for 120 units, which would effectively increase MDD by 50 percent to approximately 110,000 gpm (76 gpm). Lastly, considering the inclusion of the Bridge Arbor residences, with estimated MDD of 960 gpd (1 gpm), the resulting combined MDD after consolidation would be approximately 525,000 gpd (365 gpm). The District's reported well production capacity is 887,000 gpd from both wells. However, State regulations recommend (and will soon require) that community water systems with under 1,000 connections have a supply source capable of satisfying the maximum day demand and that community water systems using only groundwater shall have a minimum of two approved sources before being granted a permit. Applying the recommendation to the District, each supply well should be capable of producing at least 365 gpm. To provide some surplus capacity to account for infill in the community, a ten percent allowance is recommended that would result in a needed pumping rate of approximately 400 gpm.

Current well production was determined based on the water surface elevation in the wells during pumping. Both wells are reported to be capable of producing over 400 gpm, but produces approximately 250 gpm during the dry season. Each pump is equipped with a 25-horsepower motor, and it is estimated 30 hp would be necessary for the projected increase. Each well would also require emergency backup power (required in 2024). Only one well currently has emergency power and may need to be replaced to accommodate the larger pump motor sizes.

STORAGE

The District has a total storage capacity of 712,000 gallons, representing a storage surplus of at least 230,000 gallons available for firefighting purposes. According to the District, the most recently constructed water tank included capacity in anticipation of the future addition of Meadow Pointe. Sufficient storage currently exists to meet domestic and fire storage requirements for both systems, including the comparatively minor addition of the Bridge Arbor parcels.

TRANSMISSION

As part of the PER, a hydraulic model of the District's distribution system was prepared and used to assess the current capacity of the District's system and the impacts on pressures and flow due to the addition of the Meadow Pointe system. Modeling results indicated there is adequate transmission capacity to serve domestic residential and commercial uses in the Meadow Pointe system under existing conditions if no consideration is given to fire flow demands.

When considering fire flow from the District to serve the Meadow Pointe system, significant improvements to the District's distribution system would need to be made. Fire flows will be required by SB 552 in 2032 and are recommended to be included in this project. There is the co-benefit of significantly increasing fire protection within nearly all of the District's system, which currently has insufficient fire flow capacity to meet code and local jurisdictional standards.

The District's transmission mains are also vulnerable due to lack of redundant connections between the heart of the distribution system and the two storage tanks. The failure of the long, single transmission main along Highway 20 would result in a severe drop in pressure and flow to the distribution system. A benefit of improving the fire flow capacity would be a concurrent improvement to system redundancy.

POLICY SETTING

Upper Lake is an unincorporated community in Lake County. Development in the project area is governed by the 2008 Lake County General Plan and the County's zoning code and subject to permitting through the County. The District is governed by a publicly elected board and is charged with operating and maintaining the water system facilities within its service area. Meadow Pointe is owned by a private nonprofit organization.

The project would include annexation of the three Meadow Pointe parcels and nine parcels along Bridge Arbor. A total of 12 parcels would be annexed into the District. Additionally, the District's sphere of influence would be amended to generally match the new water service area. Expansion of existing service area and sphere of influence requires review and approval by Lake County LAFCO. LAFCO will utilize this CEQA document as a Responsible Agency to review potential environmental impacts associated with the project. Growth is often a concern with LAFCO actions. A separate analysis of growth inducement potential is included in this document.

PROJECT DESCRIPTION

The project includes upgrades to the District's water system to ensure service to Meadow Pointe and Bridge Arbor do not negatively impact its existing service levels. A new distribution system would be installed in Meadow Pointe to serve existing customers. A new distribution system would be provided along Bridge Arbor. These improvements are further described below.

The Meadow Pointe water distribution system would be owned and operated by the parcel owners and provided water service from a master meter provided and read by the District. The commercial properties would be served directly by the District through their own master meters since there would no longer be a Meadow Pointe public water system. A project overview is shown on Figure 3. The project would be phased with the District and Bridge Arbor improvements occurring first and the Meadow Pointe distribution system being built subsequently.

DISTRICT IMPROVEMENTS

Proposed District improvements are shown on Figure 4. The District's current distribution system is inadequate to accommodate fire flow requirements to most areas of the District's network. The North Shore Fire Protection District has also indicated expected minimum fire flow to be available throughout Meadow Pointe. Consolidation of the two systems would reduce available fire capacity in Meadow Pointe, and further reduce fire flow capacity within the District's network. For proper consolidation, improvements to the District's system are needed to ensure code and fire jurisdiction mandated flows will be available.

The local fire jurisdiction indicated a desired fire flow for the Meadow Pointe Mobile Park of 1,500 gpm, although code minimum would likely be 1,000 gpm. The fire flow requirements for the District, as described by the District's Master Plan, are 1,000 gpm for residential areas, 1,500 gpm near schools and 2,000 gpm for the downtown area. To determine available fire flows within the District network, both currently and after consolidation, a computer hydraulic model of the system was created and used to predict fire flows. The improvements found to enhance flows to the District were also needed to provide adequate fire flow to the Meadow Pointe area.

Currently the District distribution system relies on a single 8-inch and 6-inch transmission main from the storage tanks to the main portions of the distribution system. The long and undersized transmission main contributes considerable head loss to the system under high flow conditions. The main is also the only connection and lacks redundancy. The following water main improvements would be included in the project:

- Extending a new 12-inch transmission main from the existing distribution system where Old Lucerne meets 1st Street along Old Lucerne Road, along Highway 20 to Upper Lake Lucerne Road and then parallel to Hillcrest Drive to the District's existing water tanks. This would increase fire protection flows and create a redundant connection to the existing water storage tanks. Approximately 5,850 LF of 12-inch main would be installed to accomplish the redundant connection.
- Replacement of approximately 1,100 LF of undersized existing 4-inch water main in Rice Street between 2nd Street and Highway 20 with new 8-inch main to increase existing District fire flows, increase fire flows to the Highway 20 area, and greatly improve network redundancy.

Well Site Improvements

The District's existing 25 hp well pumps are nearing the end of their service life. The pumps will require replacing soon. The project would replace both pumps with larger 30 hp pumps. The larger capacity is anticipated to be needed to meet the MDD as required under Title 22 for new water system permits. SB 522 will require redundant MDD source capacity by 2027 so that capacity should be preemptively implemented under the current project.

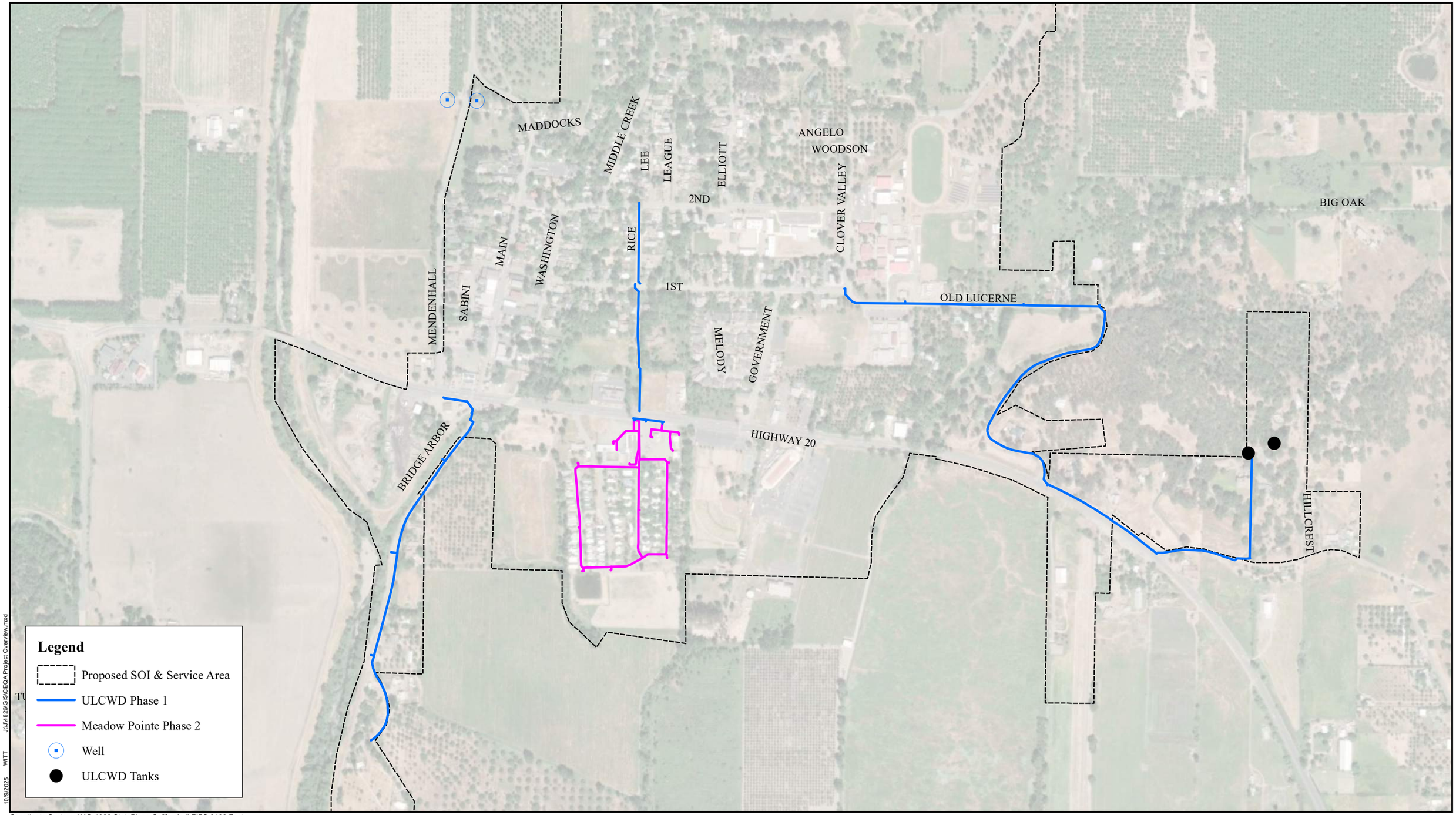

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FIGURE 3

OVERALL PROJECT & PHASING

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

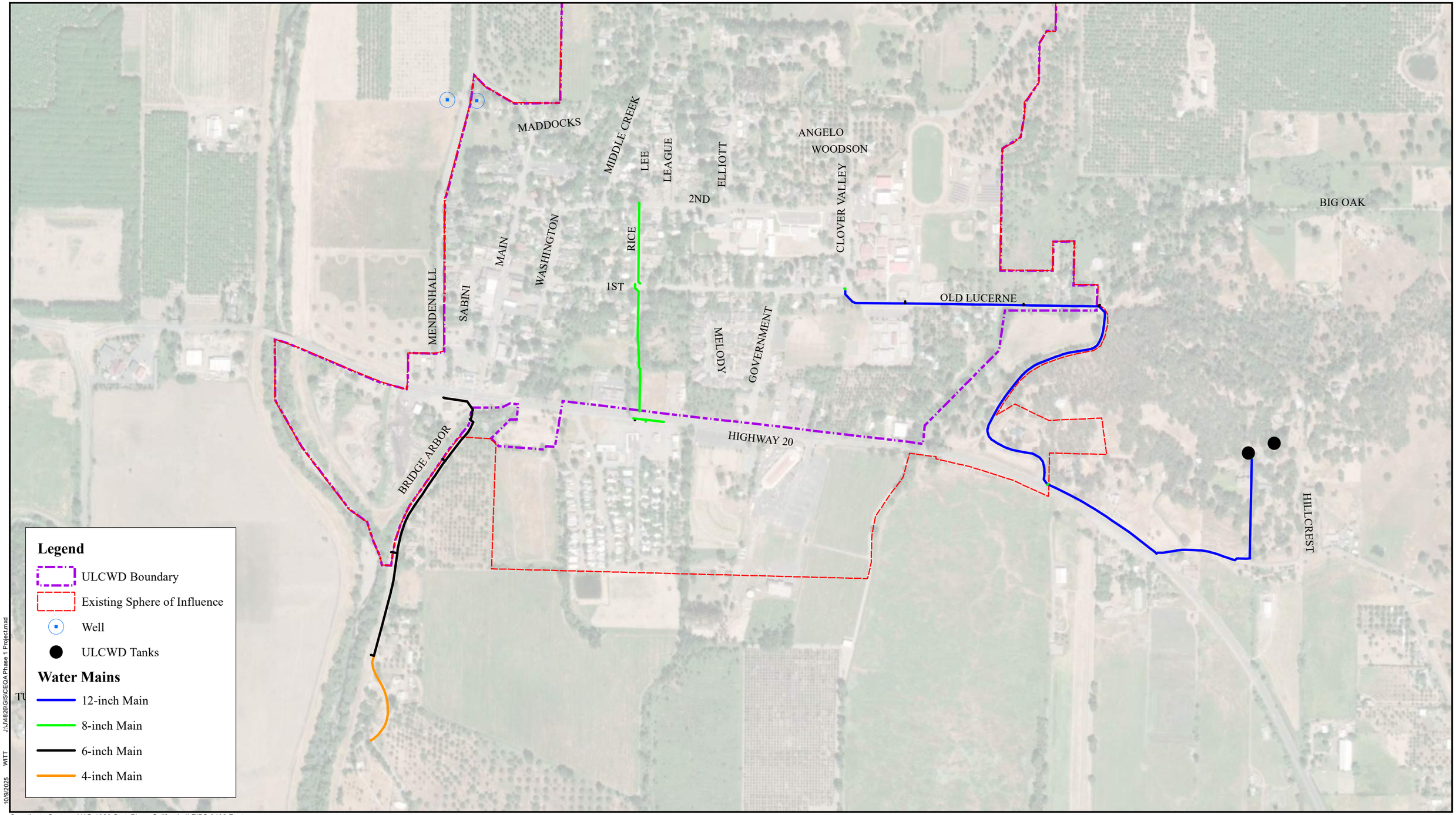

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FIGURE 4

PHASE 1 PROJECT

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

Currently, when the transmission main to the tanks is disrupted, the District must manually turn on the wells to run continuously and open a fire hydrant to avoid over pressuring the distribution system. Without this step, the system would be under-pressurized and lead to low or negative system pressure. The parallel main to the water tanks generally resolves this problem, although, since new well pumps are recommended, new upsized motor starters will also be necessary. The standard soft-start type of motor controller would be recommended to be replaced with Variable Frequency Drives (VFD) instead. They would then allow control of pressures in the distribution system without connection to the water tanks. They could also allow for power savings through slower run speeds during low demand periods, such as the winter months when well static levels are high and system demands are low.

The District's Well 2 has an emergency backup generator sized for the 25 hp motor in the well. To comply fully with Title 22, both wells would need to be equipped with emergency power. The existing generator at Well 2 is fairly new and may be sufficiently sized to operate a 30 hp motor, especially a pump motor equipped with a VFD motor controller, however, that is not certain. It is recommended that Well 2's power supply be modified to also supply power to Well 1 and be replaced with an uprated unit only if necessary. The District only operates one well at a time, and the single emergency power supply would comply with Tittle 22 requirements and would comply with SB 552, which will require emergency power generation by 2024.

MEADOW POINTE IMPROVEMENTS

All improvements within the Meadow Pointe water system would be privately owned. Water would be provided to a master meter(s) by the District. The Meadow Pointe Water System would be consolidated into the District.

Proposed Meadow Pointe improvements are shown on Figure 5. The entire Meadow Pointe domestic water distribution system will be replaced with 6-inch piping adequate for both domestic flows and fire flows. New fire hydrants will be spaced roughly 500 feet apart to be consistent with state and local regulations. The mains will be located within the existing streets. There is an existing pipe crossing across Highway 20 serving the County park. The pipe does not appear to be in a casing. A new 8-inch main will parallel Highway 20 for a short distance to provide service to the two commercial parcels, formerly part of the Meadow Pointe properties.

In addition to the new mains in the mobile park, new service laterals with meters would be installed for all customers, mostly using dual meters on a single lateral, wherever possible. Meter boxes would be located nearer to the streets, with new side laterals extended to connect to the existing services at a convenient point nearer to the units.

Any existing irrigation systems would be reconnected to the new domestic mains and metered separately with appropriate backflow devices. Meter sizing may vary depending on anticipated irrigation demands, though that is not currently known.

The Meadow Pointe water system would cease to exist. Meadow Point would purchase water from the District and invoice Meadow Point customers directly for their water use.

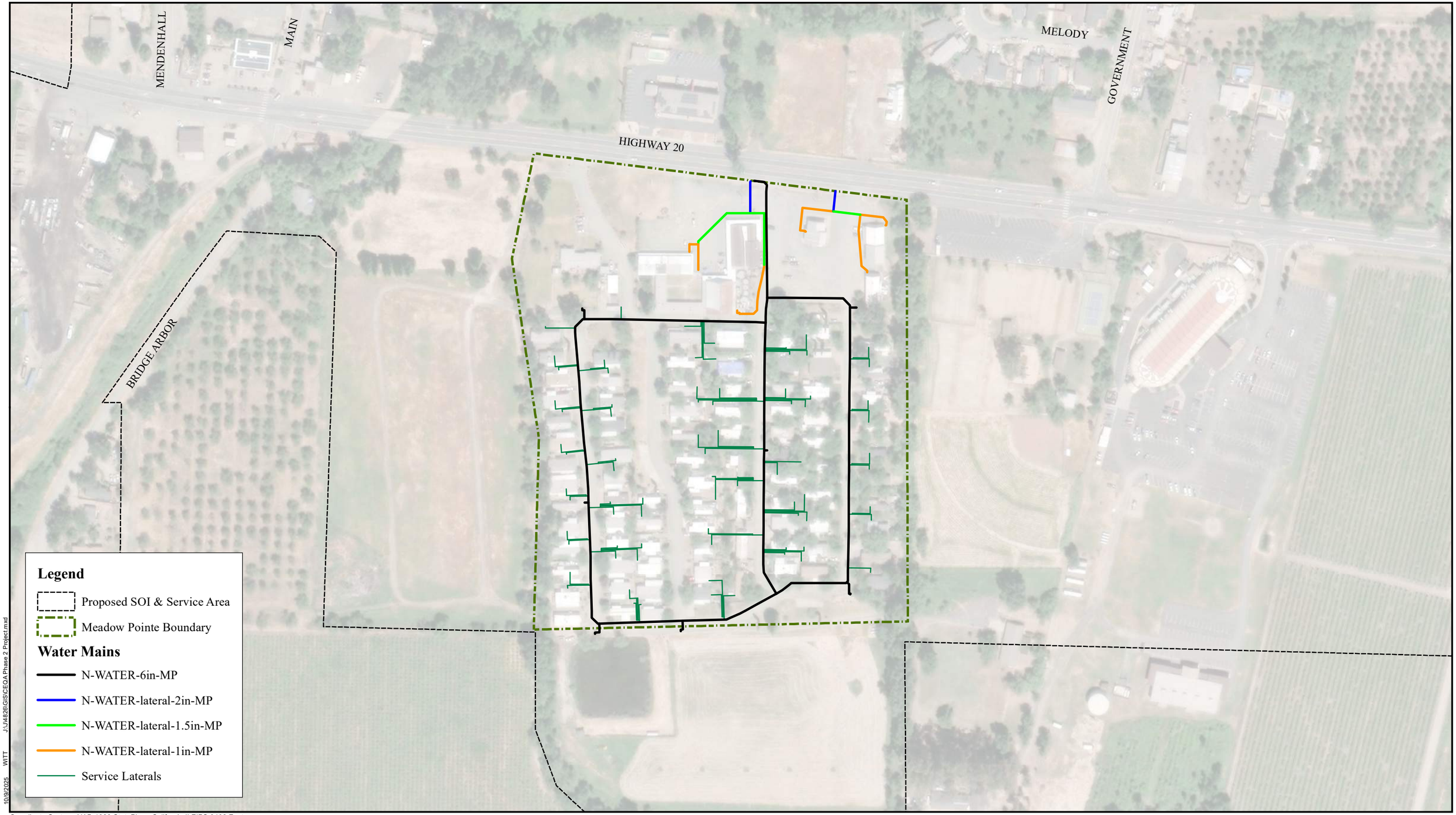

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FIGURE 5

PHASE 2 PROJECT

ULCWD/MEADOW POINTE
CONSOLIDATION
OCTOBER 2025

Abandonment of Meadow Pointe Existing Facilities

The existing facilities no longer needed after installation of the recommended improvements would be abandoned in place, without removal. Demolishing of any facilities will be left to the owners to perform.

The two existing Meadow Pointe domestic wells, MP Well 1 and MP Well 2, would be decommissioned and properly abandoned by removing their pumps and discharge headers, disconnecting the GAC filtration units and capping the wells per County and/or State requirements. Disposal of the GAC units would be the responsibility of the mobile park owners.

The existing domestic and fire system piping would be abandoned and filled with a foamed cement slurry. Existing hydrants would be removed and either salvaged or disposed of depending on their condition. The remainder of the fire system components, (e.g. hydro-pneumatic tank, pump, and backup generator) would remain as they belong to the system owners. The existing irrigation well would be separate from the new system, but not fully abandoned. The existing water treatment plant and storage facilities would be disconnected only.

BRIDGE ARBOR NORTH ROAD IMPROVEMENTS

Providing service to existing residences along Bridge Arbor was determined to be feasible in the Feasibility Study. Bridge Arbor has approximately nine parcels with 13 residences. The wells located along Bridge Arbor have been routinely tested since 2001. Many have had significant concentrations of MTBE and TBA present, some just recently, and some since initial testing began. It is recommended to connect Bridge Arbor parcels to the nearby existing water mains at the intersection of Highway 20 and Mendenhall and for the parcels to be annexed into the District's service area. A combination of 6-inch or 4-inch main would extend the length of the road with service provided to each existing parcel. Each service would include an approved reduced pressure backflow prevention device as the existing wells would remain. Proposed improvements would be part of Phase 1 shown on Figure 4.

PROJECT CONSTRUCTION

It is anticipated that most of the construction will include eight-person crew(s) working weekdays. Equipment is anticipated to include: an excavator, a loader, a dump truck, a skip loader, an air compressor, a transport truck, an earth compactor, a pavement grinder, a paving machine, a directional drill rig, a vacuum trailer, and a generator. Operations and material stockpiling will be generally constrained to paved areas. Each phase would include an erosion control plan to be prepared by the contractor that would be consistent with the Construction General Permit but not subject to reporting requirements. The entire project is approximately 0.75 acre of disturbance.

Pipeline Installation

In most areas, the pipeline would be installed using open cut trenching. It is anticipated that the majority of the pipeline would be installed within existing paved roadways and/or on road shoulders. The Rice Street extension and the 12-inch main between Upper Lake-Lucerne Road and the tanks would be constructed overland. Pipeline construction rates are expected to exceed 200 feet per day for each crew that is installing pipeline.

Construction equipment will generally be limited in size due to roadway widths in the project area. It is expected that each pipeline crew would utilize an excavator (midi or small standard size excavator),

compaction equipment and loader and be supported by two axle, six-yard dump trucks or three axle, ten-yard dump trucks for handling spoils and supplying backfill materials. A large hoe-ram may be needed to complete the excavation where large boulders are encountered. The trench depths will generally be 42 inches deep and trench widths will vary from a minimum of 12 inches and likely no wider than 24 inches. Approximately six 10-yard trucks of export trench spoils and approximately ten 10-yard trucks of imported bedding materials will be generated each week for approximately 20 weeks.

If shallow groundwater were to be encountered during construction activities, dewatering activities would be required. In the event that groundwater encountered during pipeline construction could not be contained on site or could not be pumped into tank trucks and transported to a disposal facility, the groundwater could be discharged to a surface water body. This would require obtaining a General Order for Dewatering and Other Low Threat Discharges to Surface Water Permit (National Pollutant Discharge Elimination System (NPDES) # CA0083356 from the Central Valley Regional Water Quality Control Board (CVRWQCB).

Trench backfilling would begin immediately after the pipe was installed in the trenches. Appropriate backfill materials will be used to prevent damage to the pipelines and allow adequate backfill compaction using appropriate equipment. Imported backfill would be delivered to stockpiles near the open trenching. During construction, vertical wall trenches would be temporarily closed at the end of each workday, either by covering with steel trench plates, using backfill material, or installing barricades to restrict access, depending on the conditions of the encroachment permits from Caltrans and the County. Once backfilling is complete, surfacing restoration would be completed.

Surface Restoration

Typical surface restoration within paved roadways would include compacting 18 inches of Class 2 aggregate base and installing a pavement patch that extends the affected lane after backfilling and compaction are complete. The surface restoration crew would typically use a grinder, a skip loader, a roller, and a paving machine. Surfacing would take approximately four weeks.

Services and Hydrants

It is anticipated that services and hydrants would be installed in a similar manner to the pipeline. The service meter boxes and hydrants are required to be outside the paved roadway. Crew size for service and hydrants may be three to four people. Each service location is expected to produce a small volume of spoils (less than one cubic yard) to off haul and a similar volume of backfill material will need to be imported. The service and hydrant installations will generate four total truck trips per day, two for spoils off-haul and two for imported backfill over the course of approximately six weeks.

Stream Crossing

To serve the Bridge Arbor area, a new water main would be extended over Clover Creek at the existing bridge. The pipeline would be hung on the downstream side of the bridge and can be accomplished form the top of the bridge without the need to work in the creek or disturb the existing wingwalls.

Schedule

It is anticipated that construction of the Phase 1 project would begin in summer 2026 and Phase 2 would commence shortly after completion of Phase 1. The projects must necessarily be bid and constructed separately due to the funding source. However, this document reviews the project as one complete project.

The entire project is expected to be constructed over approximately eight months. Trenching and water main installation would take approximately 20 weeks. Repaving impacted portions of Old Lucerne Road, Rice Street, Highway 20 (if required), Bridge Arbor and interior roads of Meadow Pointe will take approximately four weeks. Service connections, hydrants, tie-ins and well site improvements will take approximately six weeks.

GROWTH INDUCEMENT POTENTIAL

Extension of water services and annexation of parcels into existing utility service areas are activities that are often associated with growth. Growth can result in increased loads on existing roadways, utilities, changes in the noise environment and other environmental impacts. In this case, the project is specifically intended to rectify existing MTBE contamination in the Meadow Pointe water system and existing and suspected contamination in drinking water wells along Bridge Arbor. The parcels to be provided water service are developed. This section describes the areas to be annexed, their development potential and the existing and proposed limits to growth.

The project would include annexation of the three Meadow Pointe parcels and parcels along Bridge Arbor. A total of 12 parcels would be annexed into the District. Table 1 lists the proposed assessor parcel numbers, addresses, current water service status and development potential based on zoning. Table 1 is keyed to Figure 6 that shows the location of parcels proposed to be annexed (some parcels have been removed from the proposal since the original Growth Analysis was conducted).

Meadow Pointe Water System

The Meadow Pointe water system is comprised of three parcels: two commercial parcels along Highway 20 (Parcel ID 11 and 12) and the mobile home park to the south (Parcel ID MP1). The two commercial parcels are within the existing Community Growth Boundary and the existing SOI. Under existing zoning, those parcels could be further subdivided, as shown in Table 1, but that potential subdivision is not precluded by the existing boundaries and existing development potential would not be increased by inclusion of those parcels in the proposed SOI and water service area. Additionally, subdivision for residential development would require a General Plan amendment and zone change, triggering environmental review under CEQA by the County. Essentially, annexation would have no impact on the two parcel's growth potential.

The Meadow Pointe mobile home park parcel (Parcel ID MP1) requires additional consideration. The parcel extends south of the existing District SOI but that portion of the parcel is not currently developed. Because the project's goal is to rectify the existing health hazard associated with existing residences impacted by the Meadow Pointe water source, the parcel is proposed to be annexed and brought entirely into the SOI. LAFCO rules require the entire parcel be annexed, including the undeveloped portion. The parcel currently has 81 units but was potentially permitted for 120 units. The County of Lake has indicated that placement of additional units beyond those existing would require a Major Use Permit. The PER analysis report included potential future service of the remaining 39 units. The project does not include extension of infrastructure to serve any additional development within the mobile home park.

The Meadow Park owners believe the undeveloped portion of the park to the west was permitted for 120 units at the time of the original approval. However, the County does not have a record of this approval and would view expansion of the park as a new project subject to a major use permit. County Code Article 43, SEC. 21-43 includes Regulations for Establishment of Mobile Home Parks, Recreational Vehicle Parks and Campgrounds and Conversion, Closure or Cessation of Use of Mobile Home Parks (Ord. No. 2836, 09/20/2007) that specifies the requirement for a major use permit and development requirements. A major

use permit would entail review of a proposed roadway network and utility extensions. A separate CEQA environmental review would be required to assess impacts associated with that major use permit. Because the entire parcel is within the Community Growth Boundary, the potential development of the remaining parcel as mobile home park would have been subject to program-level environmental review during preparation of the Environmental Impact Report for the General Plan.

Table 1: Growth Analysis of Parcels Proposed to be Annexed. The Parcel ID is indexed to Figure 6.

Parcel ID	APN	Address	Currently Served	Currently Developed	Acres	Zoning	Minimum Acres/unit	Potential New Units
1	003-054-01	9110 BRIDGE ARBOR NORTH	No	Yes	3.09	RR	5	0
2	003-054-03	9040 BRIDGE ARBOR NORTH	No	Yes	2.546	RR	5	0
3	003-055-04	8915 BRIDGE ARBOR NORTH	No	No	0.369	O	0	0
4	003-055-05	8910 BRIDGE ARBOR NORTH	No	Yes	12.328	A	40	0
~~5~~	~~003-055-09~~	~~8950 BRIDGE ARBOR NORTH~~	~~No~~	~~Yes~~	~~14.386~~	~~APZ~~	~~40~~	~~0~~
6	003-055-10	8965 BRIDGE ARBOR NORTH	No	Yes	2.794	A	40	0
7	004-010-37	9220 BRIDGE ARBOR NORTH	No	Yes	1.119	RR	5	0
8	027-161-08	9210 BRIDGE ARBOR NORTH	No	Yes	0.484	RR	5	0
9	027-161-09	9180 BRIDGE ARBOR NORTH	No	Yes	0.503	RR	5	0
10	027-161-10	9160 BRIDGE ARBOR NORTH	No	Yes	0.533	RR	5	0
11	004-010-48	485 E STATE HWY 20	No	Yes	2.633	CH	8,000 SF	14
12	004-010-49	555 E STATE HWY 20	No	Yes	1.776	C3	12,500 SF	6
MP1	004-010-47	375 E HWY 20	No	Partial	23.84	PRD	--	39

Key:

RED: Outside existing Sphere of Influence, not currently provided water service.

BLUE: Parcel is inside the existing Community Growth Boundary and District Sphere of Influence. The project would not increase existing development potential.

GRAY SHADING: Parcel with development potential.

Note: Parcel ID 5 was removed due to existing Williamson Act Contract.

No change in development status of any of the parcels proposed for annexation is anticipated due to the annexation.

Bridge Arbor North Road

The overall project includes parcels along Bridge Arbor (parcel ID 1-10) for water service and annexation. Of the Bridge Arbor parcels, only the northerly three of the ten parcels are currently within the Community Growth Boundary and only one is within the existing SOI. However, the State has indicated that the parcels should be included for water service. Parcel ID 5 was removed from annexation due to an existing Williamson Act contract.

The proposed parcels are all already developed and do not have additional growth potential based on current zoning designations. Because the parcels are already developed and have either verified or suspected water quality concerns, they are recommended to be included in the proposed SOI and service area annexation.

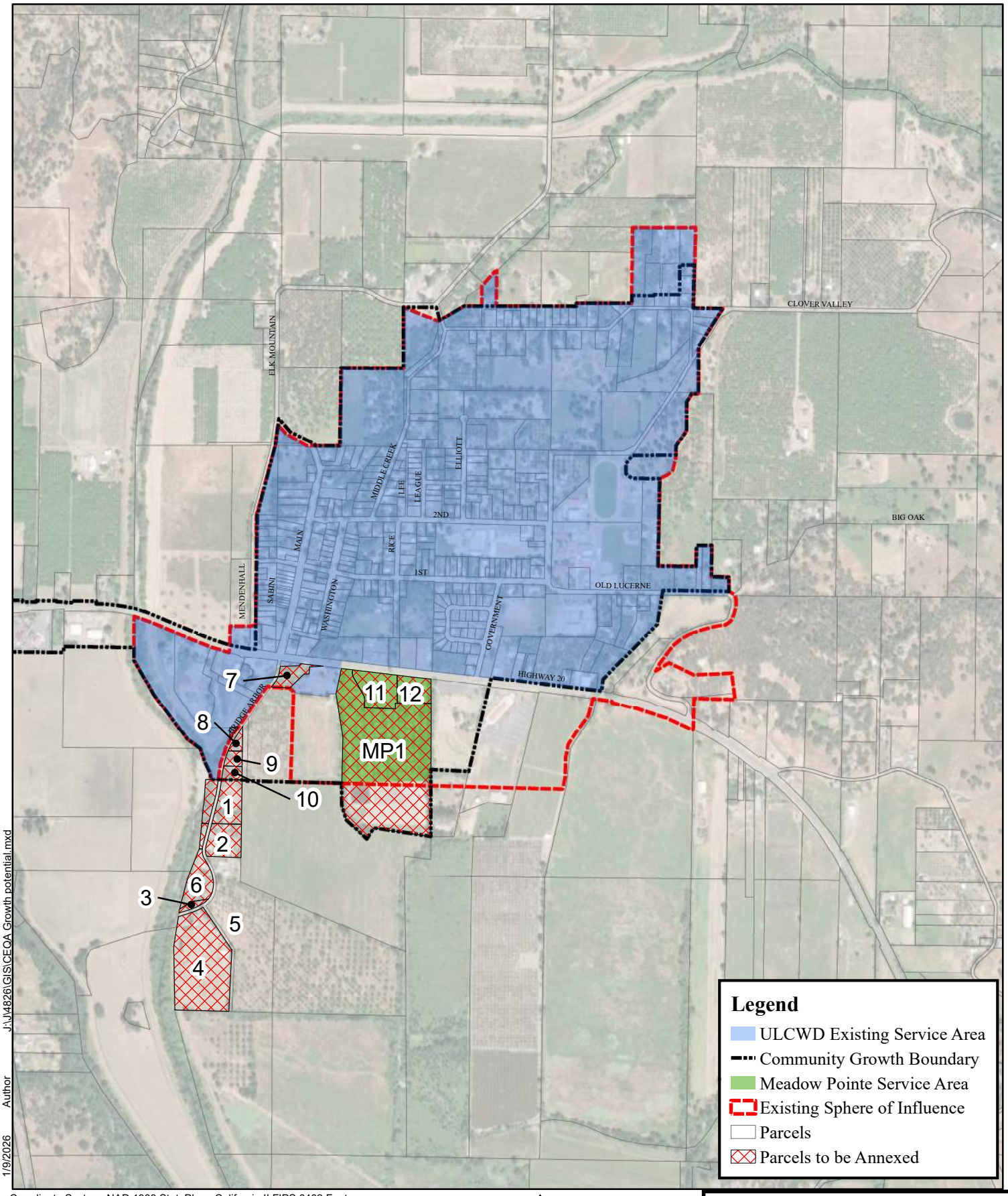

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FIGURE 6

ANNEXATION PARCELS

ULCWD/MEADOW POINTE CONSOLIDATION

JANUARY 2026

Accessory Dwelling Units

The growth analysis does not consider the potential for accessory dwelling units (ADU). The California Department of Housing and Community Development[2] indicates that:

> Pursuant to Government Code Section 65852.150, the California Legislature found and declared that, among other things, California is facing a severe housing crisis and ADUs are a valuable form of housing that meets the needs of family members, students, the elderly, in-home health care providers, people with disabilities and others. Therefore, ADUs are an essential component of California's housing supply.
>
> ADU law and recent changes intend to address barriers, streamline approval, and expand potential capacity for ADUs, recognizing their unique importance in addressing California's housing needs. The preparation, adoption, amendment, and implementation of local ADU ordinances must be carried out consistent with Government Code, Section 65852.150 and must not unduly constrain the creation of ADUs. Local governments adopting ADU ordinances should carefully weigh the adoption of zoning, development standards, and other provisions for impacts on the development of ADUs.

ADUs must be considered in any residential or mixed-use zone by California law and ADUs are not necessarily subject to General Plan or zoning ordinance densities or minimum lot sizes. Additionally, ADUs must be permitted ministerially (without discretionary approval). Due to the state's interest in utilizing ADUs to meet housing needs and the County's responsibility to permit ADUs consistent with California law, it is assumed that parcels proposed to be annexed could result in additional ADUs with or without annexation. ADUs are therefore not included in the growth analysis.

Funding

The project will be funded by the State Water Board through the DFA's SAFER program. The SAFER program does not permit funding facilities that would serve undeveloped parcels.

OTHER PUBLIC AGENCY APPROVALS

The project is under District review authority. The project may require additional permitting approvals from the following agencies:

Lake County Local Agency Formation Commission

Projects that require changes to existing boundaries require LAFCO review and approval. The project would require changes to the District's existing water service area and sphere of influence. These changes would be reviewed and approved by LAFCO. LAFCO would function as a Responsible Agency and utilize this CEQA document for its environmental review of the project. The proposed boundaries are shown on Figure 7.

County of Lake

All work within the County of Lake right-of-way would require encroachment permits.

[2] https://www.hcd.ca.gov/policy-research/docs/adu_december_2020_handbook.pdf

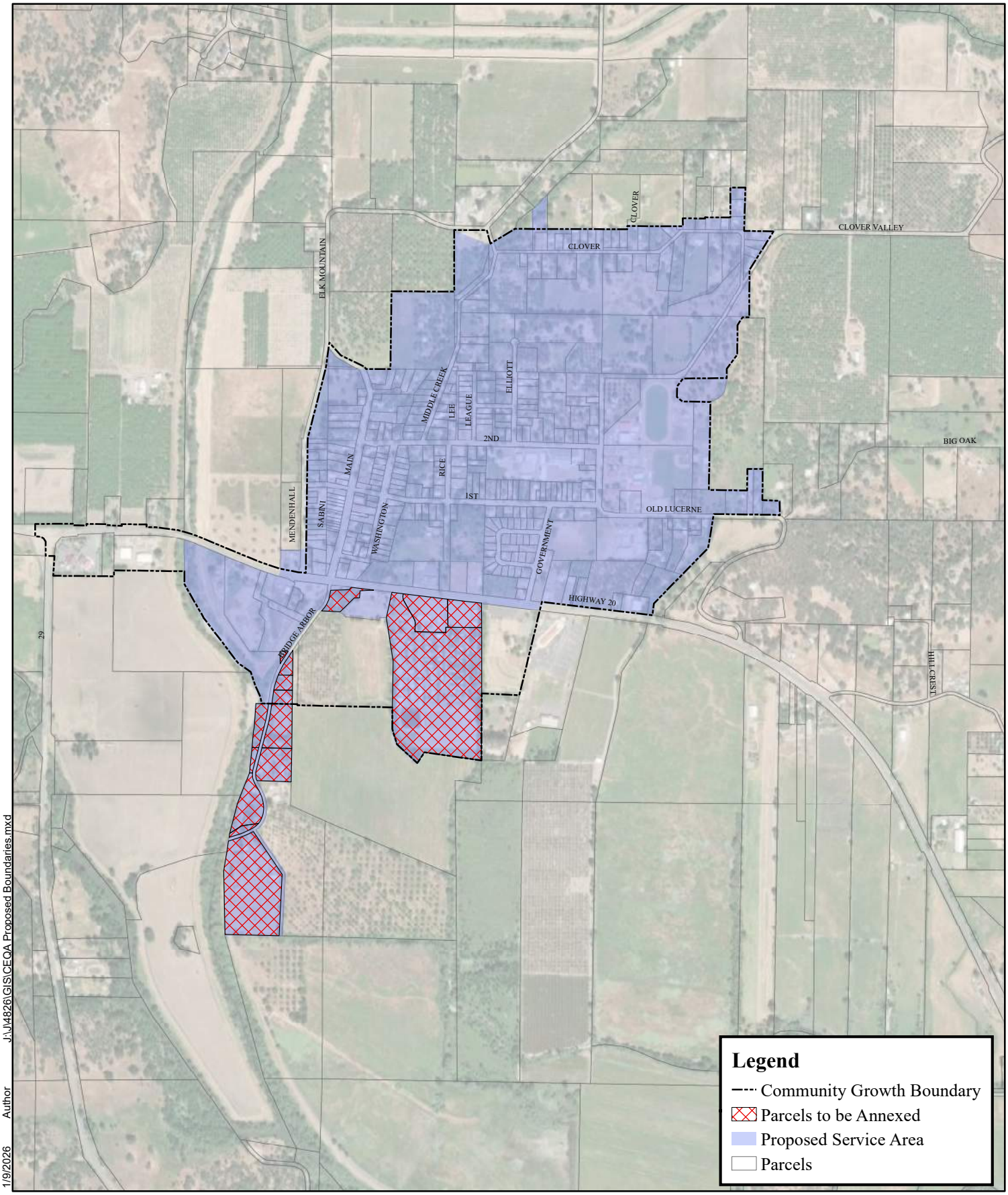

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FIGURE 7

PROPOSED BOUNDARIES

ULCWD/MEADOW POINTE CONSOLIDATION

JANUARY 2026

Central Valley Regional Water Quality Control Board

CVRWQCB has discretionary authority regarding the following permits and approvals:

- NPDES permit. The U.S. Environmental Protection Agency (EPA) has delegated responsibility for issuance of Clean Water Act (CWA) NPDES permits to the Regional Water Quality Control Boards within California. These permits are required to ensure protection of surface waters from construction and other land-disturbing activity.
- 401 Water Quality Certification. If impacts to wetlands occur, a 401 Water Quality Certification would be required.
- A Waiver of Waste Discharge Requirements (or similar) may be required for work crossing Clover Creek.

State of California Water Resources Control Board, Division of Drinking Water (DDW)

DDW may require an amendment to the District's water permit to recognize the consolidation of the two water systems.

U.S. Fish and Wildlife Service (FWS) and the California Department of Fish and Wildlife (CDFW)

Consultation is required with these agencies if a project has the potential to take or otherwise harm federally listed or state-protected wildlife and plant species. Portions of the project that would occur within streams or associated riparian habitat would require a streambed alteration agreement from CDFW.

US Army Corps of Engineers (USACE)

A USACE permit would be required for the project if it results in fill of wetlands or impacts streams below ordinary high water.

California Department of Fish and Wildlife (CDFW)

Any work within a stream or lake would require consultation with CDFW and generally require permit coverage. Any activity that could result in take of a California-listed threatened or endangered species would require consultation and generally require an incidental take permit. A permit from CDFW may be required for crossing Clover Creek.

Caltrans

Any work within Highway 20 would require an encroachment permit from Caltrans. Any work within the right-of-way would be subject to Caltrans permit requirements.

ENVIRONMENTAL SIGNIFICANCE CHECKLIST:

The following list of questions is provided by Appendix G of the CEQA Guidelines, in order to determine a project's environmental impacts. The checklist utilized herein was significantly updated by the State of California in 2022.

Based on the project description, answers to the questions fall into one of four categories:

- Potentially Significant Impact
- Less Than Significant Impact with Mitigation Incorporation
- Less Than Significant Impact
- No Impact

With regard to the checklist, a "No Impact" response indicates that no impact would result from implementation of the project. A "Less Than Significant Impact" response indicates that an impact would occur, but the level of impact would be less than significant. A "Less Than Significant with Mitigation Incorporation" response indicates that an impact is involved, and, with implementation of the identified mitigation measure, such impact would be less than significant. A "Potentially Significant Impact" response indicates that there is substantial evidence that impacts may be significant if mitigation measures are unknown, infeasible, or not proposed. Each response is discussed at a level of detail commensurate with the potential for adverse environmental effect.

The discussion following each checklist item consists of an *Analysis* section, a *Cumulative Impacts* discussion, and a section for identification of *Mitigation Measures*, as necessary. The *Analysis* section includes a discussion addressing whether the project would result in potential adverse environmental impacts. All potential impacts have been considered, including on-site and off-site impacts, direct and indirect impacts, construction and operation-related effects, as well as cumulative effects. The *Cumulative Impacts* section presents information regarding the project's potential cumulative impacts and is included in this section. If an impact(s) has been identified and mitigation is identified to reduce the impact to a less than significant level, then such measures are contained in the *Mitigation Measures* sections.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are used to determine if a project will have a potentially significant impact or a less than significant impact on each of the criteria listed in the following sections. Section 15064.7 of the CEQA Guidelines defines thresholds of significance as follows as "an identifiable quantitative, qualitative or performance level of a particular environmental effect, non-compliance with which means the effect will normally be determined to be significant by the agency and compliance with which means the effect normally will be determined to be less than significant."

Lead Agencies are encouraged to adopt their own thresholds of significance that area "adopted by ordinance, resolution, rule, or regulation, and developed through a public review process and be supported by substantial evidence." Additionally, Lead Agencies may adopt or use "thresholds of significance previously adopted or recommended by other public agencies or recommended by experts" or "adopt or use an environmental standard as a threshold of significance." Environmental standards include "(1) a quantitative, qualitative or performance requirement found in an ordinance, resolution, rule, regulation, order, plan or other environmental requirement; (2) adopted for the purpose of environmental protection; (3) addresses the environmental effect caused by the project; and, (4) applies to the project under review."

I AESTHETICS

Except as provided in Public Resources Code Section 21099, would the project:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Have a substantial adverse effect on a scenic vista?	□	□	□	■
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	□	□	□	■
c. In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	□	□	□	■
d. Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	□	□	□	■

Environmental Setting

The project is located in the unincorporated rural community of Upper Lake in northwestern Lake County, California. The terrain within the community is generally flat with gently sloping hills to the north, west and east with steep ridges with small intermittent valleys beyond. Clear Lake is approximately 3.3 miles southeast of the community. The project area is rural in nature and residential development is clustered within the water service area. Commercial uses occur primarily within the downtown area along Main Street and along Highway 20. Areas outside of the residential core are generally agricultural.

The water service area is primarily located north of Highway 20 with minor portions extending south of the highway. Highway 20 is designated as an eligible scenic highway by Caltrans but has not been officially designated[3]. There are no other designated scenic highways visible from the project area. The major sources of light and glare in the project vicinity are from residential development and State Highway 20 vehicular traffic.

Analysis

a. Would the project have a substantial adverse effect on a scenic vista?

A scenic vista is generally considered a view of an area that has remarkable scenery or a resource that is indigenous to the area. Although the project area is not considered to be a scenic vista (it is generally flat) for the purposes of this environmental analysis, the site does have characteristics that most people would consider aesthetically pleasing and a positive visual resource. Most of the project location is surrounded by rural residential development and would occur in existing roadways or easements.

[3] https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways

The proposed project would not result in the disturbance or elimination of open space areas or remove an object of aesthetic value. The project would not result in long-term physical adverse changes to the height or bulk of structures or view blockages within the view shed of the project area or along State Highway 20. Portions of the distribution system improvements would occur within or adjacent to Highway 20. Because those areas would be limited to below-ground water mains, they would not be visible once construction is complete. Therefore, obstruction of scenic views will be avoided.

Construction activities associated with the project would create dust, expose soil from grading, and create soil piles from trenching and excavation. Those short-term construction related activities would cease after construction is complete and existing surfaces would be restored. Short-term construction impacts associated with the project would not have a significant impact on any scenic vista. The project would not result in long-term impacts since the water mains would be below ground with existing surfaces restored.

b. Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Upper Lake—Nice Area Plan identifies Highway 20 as being a potential state scenic route through the project area, though it was never officially designated. Elk Mountain Road and Clover Valley Road are designated as potential County scenic routes[4], as shown on Figure I-1. All pipelines would be installed below grade where they would intertie with the existing water distribution system in Highway 20 and within existing road rights-of-way. Some portion of the new water main would be installed adjacent to Highway 20 but would similarly be located below ground on completion. No trees are anticipated to be removed in association improvements along Highway 20 and the County does not have a tree preservation ordinance. Any visual impacts would be short term and limited to the construction phase of the proposed project. As such, the proposed project would not introduce features that would adversely affect the future use of Highway 20 as a scenic roadway and would have no impact.

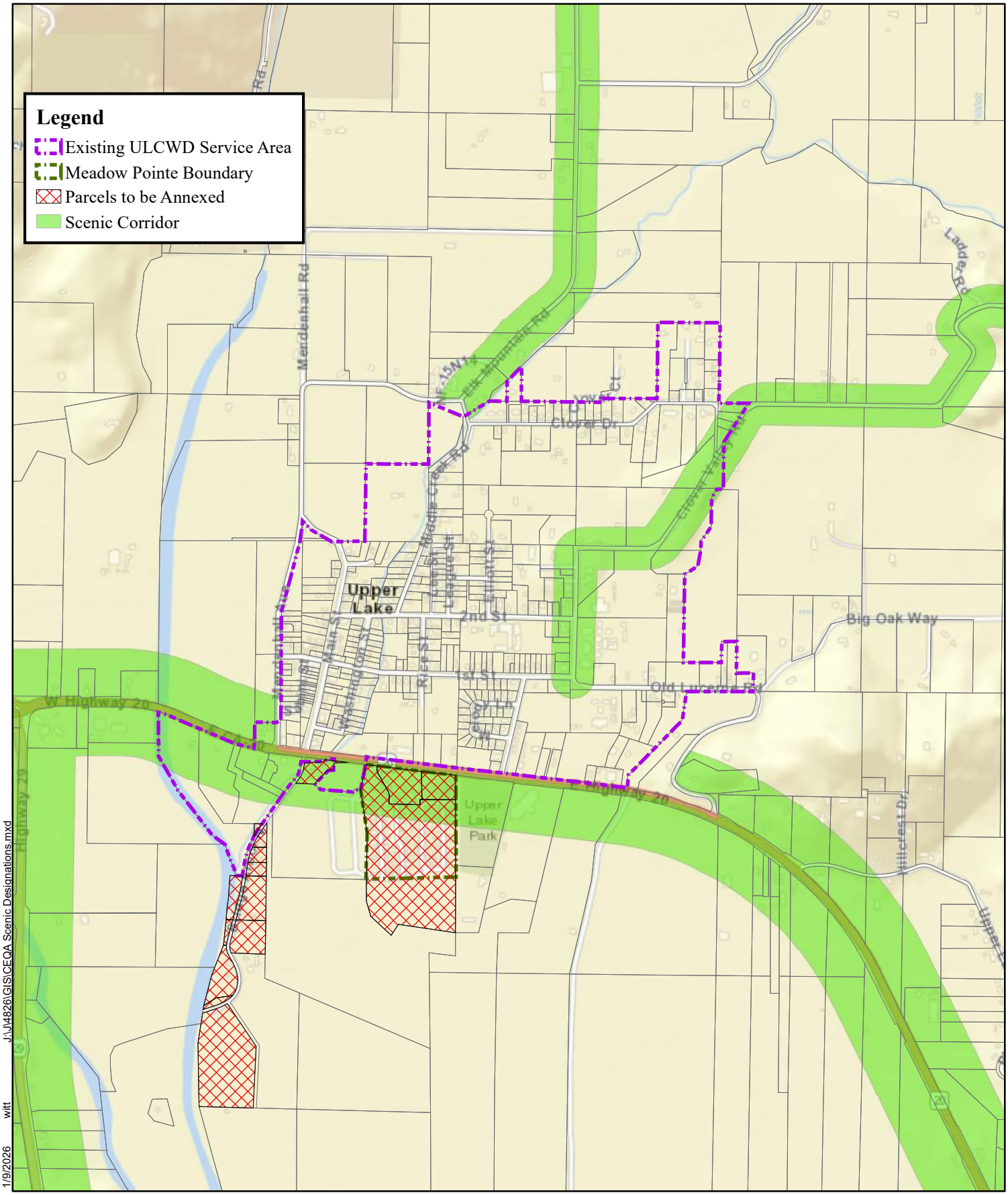
c. In nonurbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project will not significantly degrade the existing visual character of the project area. As shown on Figure I-1, there are both Scenic Corridor and Scenic Resources zoning designations in the project area. The new water mains and service laterals would be underground, and the ground surface would be restored upon completion of construction. The project would not substantially degrade the existing visual character of the project sites or project area.

d. Would the project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The project would not create a new substantial source of light or glare. New water mains and appurtenances would be constructed below grade with surfaces restored. No lighting is proposed by the project.

[4] Figure 3-3. Upper Lake—Nice Area Plan, Draft, undated.
http://www.lakecountyca.gov/Assets/Departments/CDD/Area+Plans/Upper+Lake+-+Nice+Area+Plan.PDF?method=1



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

NORTH

0 300 600 1,200 Feet

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475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE I-1

SCENIC DESIGNATIONS

ULCWD/MEADOW POINTE CONSOLIDATION

JANUARY 2026

Cumulative Impacts

There are no adverse cumulative environmental impacts to aesthetic resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to aesthetic resources have been identified; therefore, no mitigation is required.

II AGRICULTURAL & FOREST RESOURCES

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	□	□	□	■
b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?	□	□	□	■
c. Would the project conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	□	□	□	■
d. Would the project result in the loss of forest land or conversion of forest land to non-forest use?	□	□	□	■
e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	□	□	□	■

Environmental Setting

Land uses in the project area include residential, rural residential, commercial, agriculture and various transportation corridors, including Highway 20. None of the land in the project area subject to disturbance by the project is currently in agricultural use, although some agricultural use occurs in the project vicinity. The project would occur almost entirely in existing roadways, on existing water facility sites or otherwise disturbed areas that are not in agricultural use.

Project area zoning includes the following designations (shown on Figure II-1):

Zoning Designation	Agricultural Uses Allowed
APZ – Agricultural Preserve District	Yes
C2 – Community Commercial District	No
C3 – Service Commercial District	No
CH – Highway Commercial District	No
M2 – Heavy Industrial	No
O – Open Space District	Yes
PDR – Planned Development Residential District	Limited
R1 – Single-Family Residential District	No
R2 – Two-family Residential	No
R3 – Multi-family Residential	No
RL – Rural Lands District	Yes
RR – Rural Residential District	Yes
SR – Suburban Reserve	Limited

Regulatory Setting

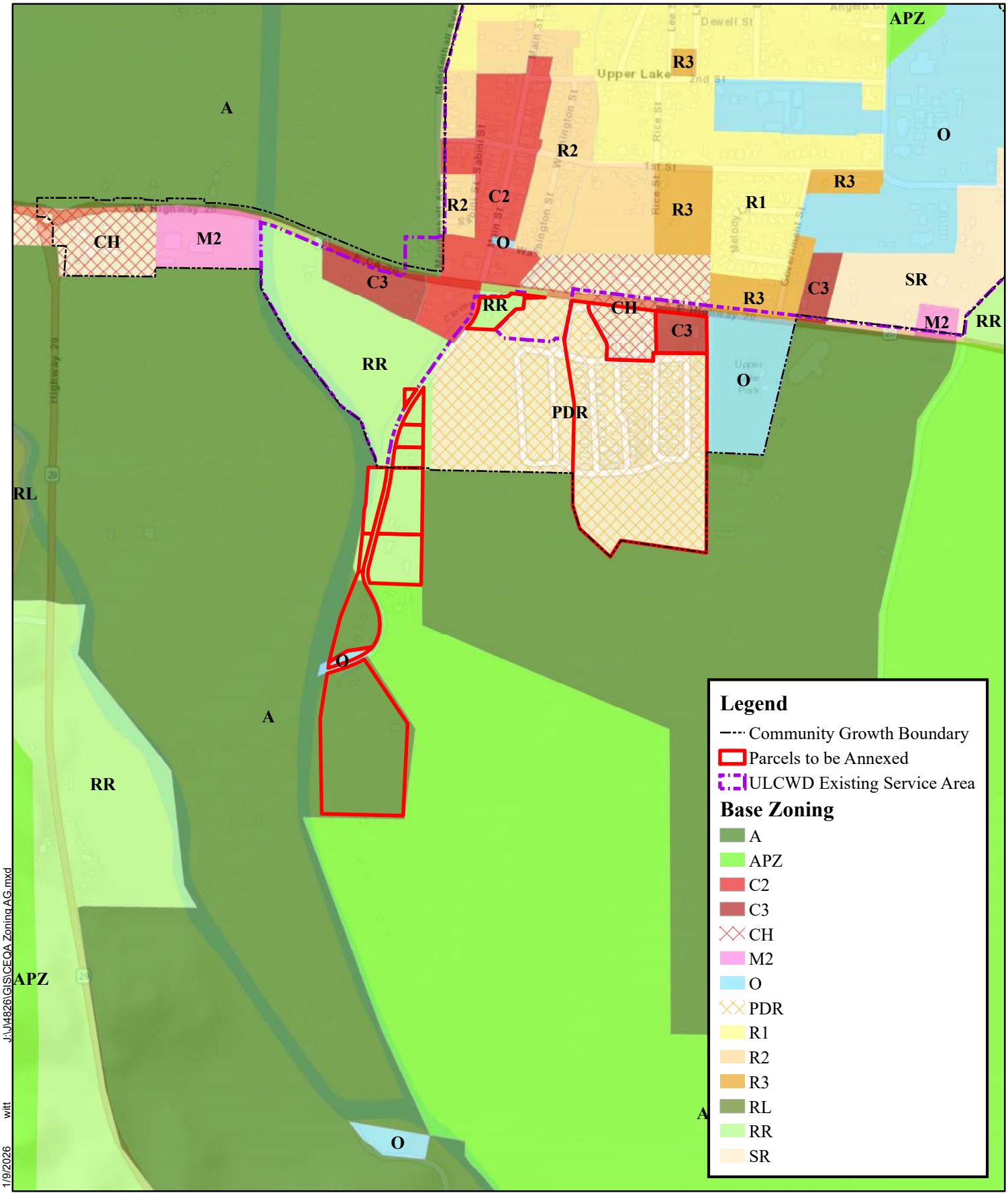
FARMLAND MAPPING AND MONITORING PROGRAM

Agricultural lands within the state of California are rated according to soil quality and irrigation status by the Farmland Mapping and Monitoring Program (FMMP). The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The best quality land is called Prime Farmland, followed by Unique Farmland, Farmland of Statewide Importance, in decreasing order of importance. The maps are updated every two years with the use of aerial photographs, a computer mapping system, public review, and field reconnaissance.

The project area is primarily designated as Urban and Built-up Land, Farmland of Local Importance, Grazing Land, Other Land and large areas of Prime Farmland generally beyond the project extents, as shown on Figure II-2.

WILLIAMSON ACT

Agricultural land in the project area may also be subject to the California Land Conservation Act of 1965, more commonly referred to as the Williamson Act. The Williamson Act enables local governments to enter contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are lower than normal because they are based on farming and open space uses as opposed to full market value. None of the project locations are under contract under the Williamson Act.



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witt

1/9/2026

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Zoning: Lake County GIS

NORTH

0 200 400 800 Feet

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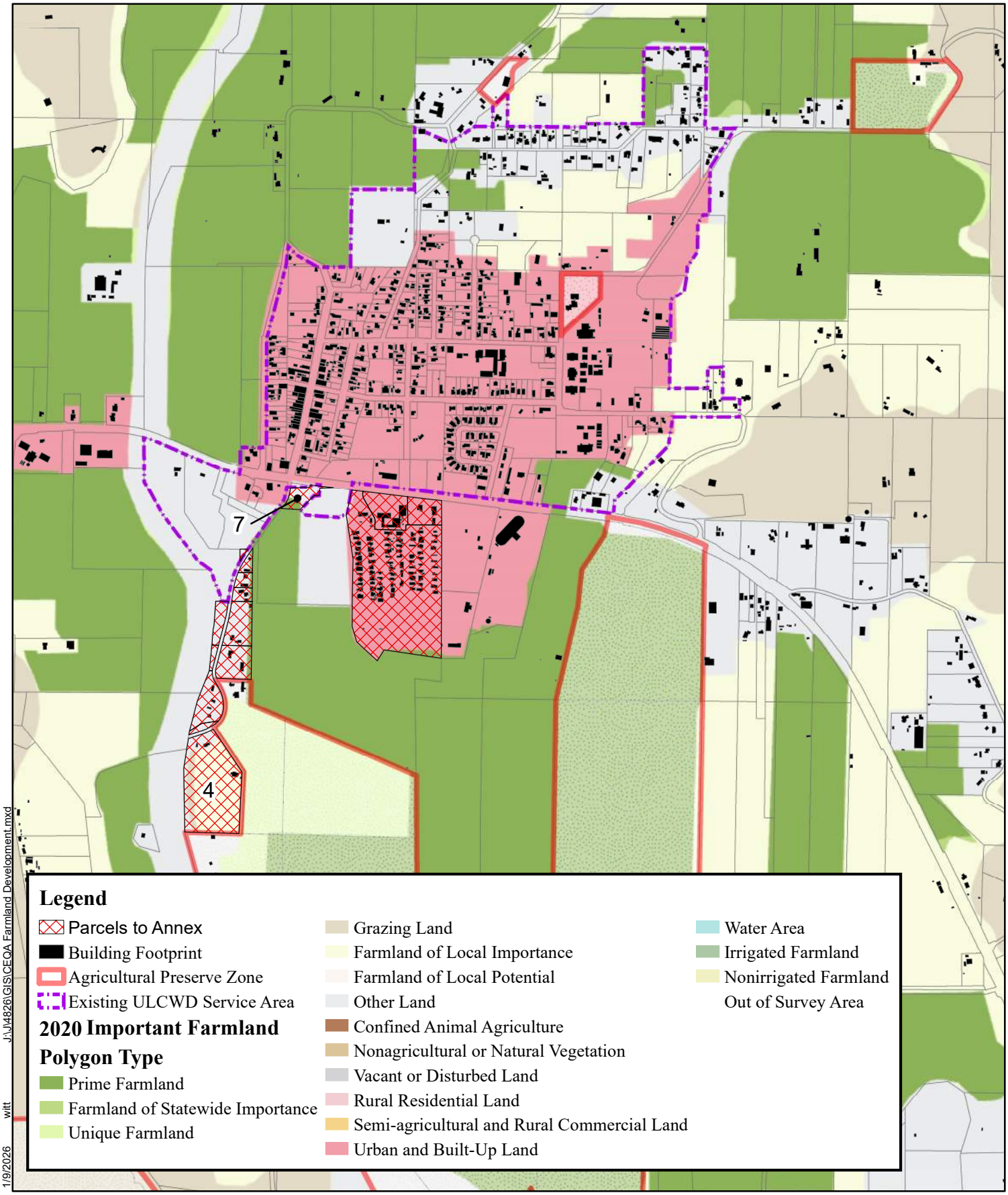
FIGURE II-1

ZONING

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US
Data Source Information:
California Department of Conservation (2020)

NORTH

0 295 590 1,180 Feet

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FIGURE II-2
FARMLAND DEVELOPMENT POTENTIAL

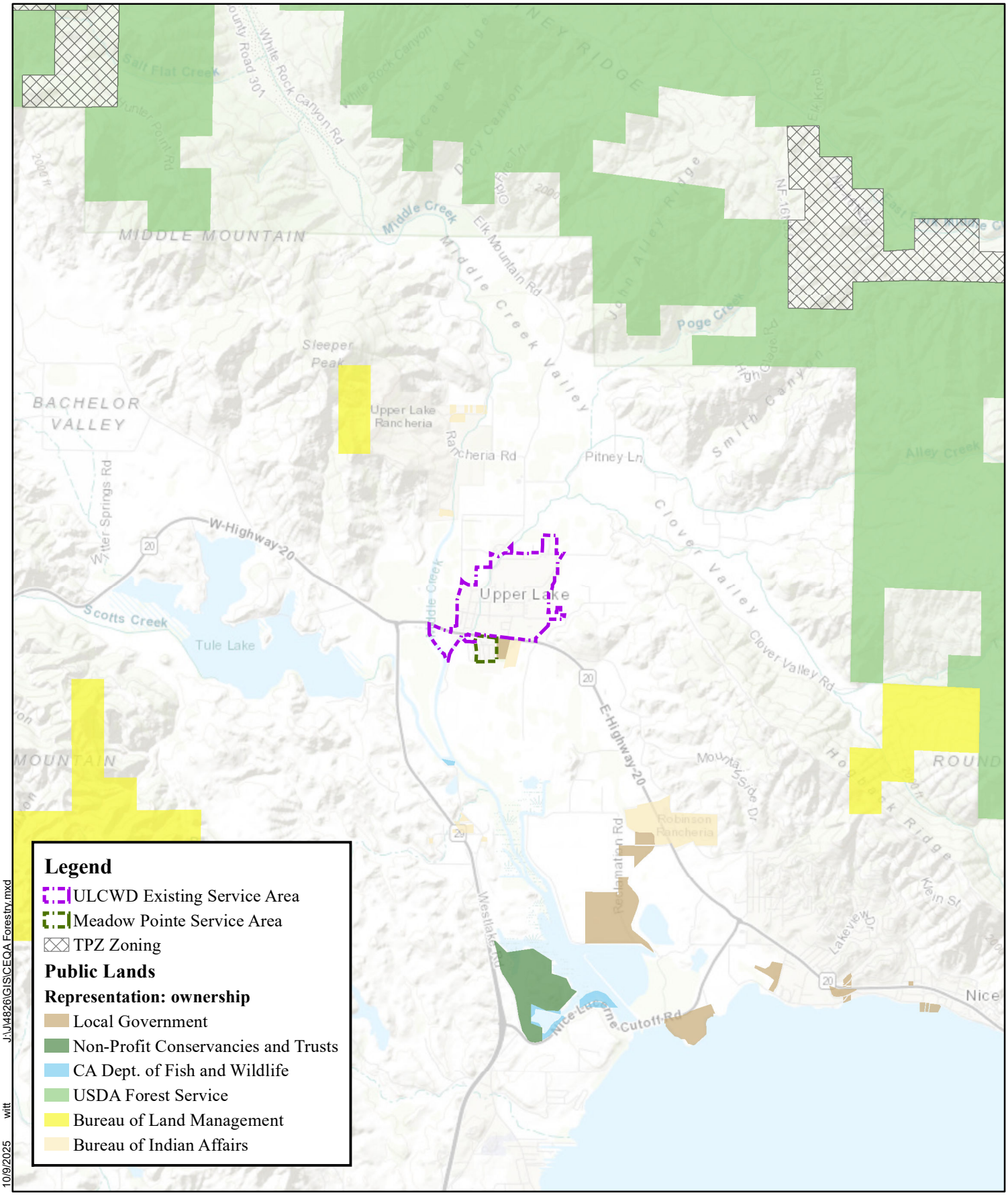
ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

FOREST RESOURCES

The project area is not forested and is primarily developed with residential and limited commercial uses. It is an existing unincorporated town. The Mendocino National Forest is between two and three miles to the north and east of the project area, separated by oak woodlands and grasslands. The state defines Timberland, Timber Production Zones and Forest Land for use in local zoning code. The terms are defined as follows:

- Government Code, Title 5, Section 51104(f): "Timberland" means privately owned land, or land acquired for state forest purposes, which is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, and which is capable of growing an average annual volume of wood fiber of at least 15 cubic feet per acre.
- Government Code, Title 5, Section 51104(g) "Timberland production zone" or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h). With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone."
- Public Resources Code, Division 10.5, Section 12220(g): "Forest land is land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions, and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits."

As shown on Figure II-2, the Mendocino National Forest supports Timberland and Forest Land. The County has also zoned areas near but outside of the project area as TPZ.



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Public Lands: CalFire (2017)

NORTH

0 0.25 0.5 1 Miles

FIGURE II-3

FORESTRY RESOURCES

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

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J:\J4826\GIS\CEQA Forestry.mxd witt 10/9/2025

Analysis

a. Would the project convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

As shown on Figure II-2, the Farmland Mapping system shows project areas designated as Urban and Built-up Land, Farmland of Local Importance, Grazing Land, Other Land and large areas of Prime Farmland generally beyond the project extents. Parcels with Farmland designations proposed to be included in the annexation are indicated in the table below with their Farmland designation (Grazing Land designations are not included).

Parcel ID	Farmland Designation
4	Farmland of Local Importance

Project components would generally be located within developed roadways, roadway shoulders or already developed areas that do not currently support farmland. Because the project would not extend outside of those developed areas or developed parcels, the project would not convert Prime Farmland, Unique Farmland or Farmland of Statewide Importance to non-agricultural uses.

b. Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?

The project locations are generally in existing roadways, roadway shoulders or parcels already developed with water infrastructure and would not interfere with any Williamson Act contract. As shown on Figure II-2, no parcels in the proposed annexation area have existing Williamson Act contracts. While some of the zoning designations within the water service areas do allow agricultural uses, any existing agricultural use would not be impacted by implementation of the water system improvements in the long term as water mains would be installed below ground with surfaces restored.

Parcels along Bridge Arbor are zoned RR and A, both allowing agriculture. However, these parcels are relatively small in size and already developed with residences and supporting wells. Extension of water service to correct potential MTBE contamination in the area would not conflict with the existing zoning. The Meadow Pointe parcel is zoned PDR and allows limited agricultural uses. As with parcels along Bridge Arbor, the parcel is already developed as a mobile home park and extension of District water service to the parcel to correct the existing MTBE contamination will not conflict with existing zoning.

c. Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

Forest land, as defined by the U.S. Forest Service, includes land at least ten percent of which is stocked by trees of any size, or land formerly having had such tree cover that would be naturally or artificially regenerated. Forest land includes transition zones, such as areas between heavily forested and non-forested lands that are at least ten percent stocked with forest trees and forest areas adjacent to urban and built-up lands.

The project area does not meet the definition of forest land as most of the project area is developed with urban uses. No locations within the immediate project area are zoned TPZ (Figure II-1). As shown on Figure II-3, large areas in the project vicinity are within Mendocino National Forest. However, the project does not propose any activities related to timber harvest nor would it result in the conversion of

forest land to non-forest uses. As such, there would be no impact to forest land or conversion of designated land to non-forest uses due to project implementation.

d. Result in the loss of forest land or conversion of forest land to non-forest use?

While the surrounding area supports forest land, the project locations do not support forest land and would occur within existing roadways and easements of developed sites. The proposed project would not result in any impact to forest land.

e. Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Because the project would be located primarily in existing roadways, public utility easements or sites currently develop with water infrastructure (areas that do not currently support Farmland or forest land), the project would not result in the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

Cumulative Impacts

There are no adverse cumulative environmental impacts to agricultural and forestry resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to agricultural and forestry resources have been identified; therefore, no mitigation is required.

III AIR QUALITY

Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project conflict with or obstruct implementation of the applicable air quality plan?	□	□	□	■
b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	□	■	□	□
c. Would the project expose sensitive receptors to substantial pollutant concentrations?	□	■	□	□
d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	□	□	□	■

Environmental Setting

The project is located within the Lake County Air Basin. The Lake County Air Quality Management District (LCAQMD)monitors and manages air quality in Lake County.

LAKE COUNTY AIR BASIN

The project area is in the Lake County Air Basin (LCAB), which is contiguous with the boundaries of Lake County and the local air quality agency, the LCAQMD. The LCAB is located within the northern Coast Ranges of California. This mountain system consists of long, parallel ridges which trend from the south to the north. In Lake County, the mountain pattern is conspicuously interrupted by the Clear Lake Basin. Clear Lake occupies this basin in approximately the middle one-third of the county. The northern third of the county is largely unoccupied, much of it lying within the Mendocino National Forest. Mountains are also predominant in the southern one-third of Lake County. The topography ranges from a low of approximately 1,100 feet in elevation to over 7,000 feet at the peaks of the surrounding coastal range.

REGIONAL CLIMATE AND METEOROLOGY

Lake County climate, like much of California, is Mediterranean in nature. Summers are warm and dry, and winters are cool and moist. Much local variation is standard in Lake County, reflective of its mountainous character. Lake County is near the edge of a more transitional climatic zone, which is influenced more by the Pacific Ocean. Its proximity to the oceanic influence, elevation, and mountainous terrain combine to create a local climate that is somewhat more severe than many other parts of California. Rainfall predominantly occurs during the months of November through March. The normal rainfall is approximately 31 inches annually. Winds are generally light due to the sheltering effect of surrounding mountains, with predominant winds from the northwest, particularly in the summer months. Wind during the winter months tends to be more variable in direction. Average predominant wind speeds throughout the year are typically less than five miles per hour.

Regulatory Setting

Air quality in the project vicinity is regulated by several jurisdictions, including EPA, ARB, and LCAQMD. These entities, described below, develop rules, regulations, and policies to attain the goals or directives imposed upon them through legislation.

FEDERAL REGULATIONS

The Clean Air Act

The Federal Clean Air Act (FCAA) required the US EPA to establish National Ambient Air Quality Standards (NAAQS) and set deadlines for their attainment. Two types of NAAQS have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions. The FCAA also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The federal Clean Air Act Amendments of 1990 (CAAA) added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The US EPA has responsibility to review all state SIPs to determine conformance to the mandates of the CAA, and the amendments thereof, and determine if implementation would achieve air quality goals. If the US EPA determines a SIP to be inadequate, a Federal Implementation Plan (FIP) may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may result in sanctions being applied to transportation funding and stationary air pollution sources in the air basin.

Federal Conformity Requirements

The CAA Amendments of 1990 require that all federally funded projects come from a plan or program that conforms to the appropriate State Implementation Plan (SIP). Federal actions are subject to either the Transportation Conformity Rule (40 Code of Federal Regulations [CFR] 51[T]), which applies to federal highway or transit projects, or the General Conformity Rule (40 CFR 51[W]), which applies to all other federal actions.

STATE REGULATIONS

California Clean Air Act

The California Air Resources Board (CARB) is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act of 1988. The California Clean Air Act (CCAA) requires that all air districts in the state endeavor to achieve and maintain California Ambient Air Quality Standards (CAAQS) for ozone, CO, sulfur dioxide (SO2), and nitrogen dioxide (NO2) by the earliest practical date. The CCAA specifies that districts focus particular attention on reducing the emissions from transportation and area-wide emission sources, and the act provides districts with authority to regulate indirect sources. Each district plan is required to either (1) achieve a 5 percent annual reduction, averaged over consecutive 3-year periods, in district-wide emissions of each nonattainment pollutant or its precursors, or (2) provide for implementation of all feasible measures to reduce emissions. Any planning effort for air quality attainment would thus need to consider both state and federal planning requirements.

LOCAL REGULATIONS

Lake County Air Quality Management District (LCAQMD)

The LCAQMD is designated by law to adopt and enforce regulations to achieve and maintain ambient air quality standards. The LCAQMD is a regional agency created by the state that regulates stationary sources of air pollution within the LCAB. The District also regulates open burning and is delegated a variety of other programs such as state Air Toxic Control Measures (ATCMs) and federal New Source Performance Standards (NSPSs). The main purpose of the LCAQMD is to enforce local, state, and federal air quality laws, rules, and regulations to maintain the ambient air quality standards (AAQSs) and protect the public from air toxics through local, CARB ATCM, and federal EPA NESHAP specific control regulations. Because Lake County is an attainment area (or is unclassified) for all criteria pollutants, both federal and state, it is not required to prepare air quality attainment/management plans.

CRITERIA POLLUTANTS

Pollutants subject to federal ambient standards are referred to as "criteria" pollutants because the United States Environmental Protection Agency (US EPA) publishes criteria documents to justify the choice of standards. The federal and California ambient air quality standards are defined below for criteria pollutants. The federal and state ambient standards were developed independently with differing purposes and methods, although both federal and state standards are intended to avoid health related effects.

Federal

- Nonattainment: any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
- Attainment: any area (other than an area identified in clause (i)) that meets the national primary or secondary ambient air quality standard for the pollutant.
- Unclassifiable: any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

State

- Unclassified: a pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- Attainment: a pollutant is designated attainment if the state standard for that pollutant was not violated at any site in the area during a three-year period.
- Nonattainment: a pollutant is designated nonattainment if there was at least one violation of a State standard for that pollutant in the area.
- Nonattainment / Transitional: is a subcategory of the nonattainment designation. An area is designated nonattainment / transitional to signify that the area is close to attaining the standard for that pollutant.

Current California and Federal standards for certain types of pollutants are shown below.

Pollutant	Averaging Time	State Standard	Federal Primary Standard
Ozone	1-Hour 8-Hour	0.09 ppm 0.07 ppm	-- 0.070 ppm
PM10	Annual 24-Hour	20 ug/m^3 50 ug/m^3	-- 150 ug/m^3
PM2.5	Annual 24-Hour	12 ug/m^3 ---	12 ug/m^3 35 ug/m^3
Carbon Monoxide	8-Hour 1-Hour	9.0 ppm 20.0 ppm	9.0 ppm 35.0 ppm
Nitrogen Dioxide	Annual 1-Hour	0.03 ppm 0.18 ppm	.053 ppm 100 ppb
Sulfur Dioxide	24-Hour 3-Hour 1-Hour	0.04 ppm -- 0.25 ppm	.14ppm -- 75 ppb
Lead	30-Day Avg. Calendar Quarter 3-Month Avg.	1.5 ug/m^3 -- --	-- 1.5 ug/m^3 0.15 ug/m^3

ppm = parts per million

ppb = parts per billion

ug/m^3 = Micrograms per Cubic Meter

MONITORING STATION DATA

Ambient air quality measurements are routinely conducted at nearby air quality monitoring stations. LCAQMD maintains four monitoring stations and is designated as attainment or unclassified for all state and federal standards. Because the county is an attainment area (or is unclassified) for all criteria pollutants it is not required to prepare air quality attainment/management plans.

Both the California Air Resources Board (CARB) and the US EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvements. The three basic designation categories are nonattainment, attainment, and unclassified, as defined above.

Analysis

a. Would the project conflict with or obstruct implementation of the applicable air quality plan?

The project is located within the LCAQMD. The LCAQMD is designated to be in attainment or unclassified for all federal and state constituents (see b., below). The LCAQMD does not have an applicable air quality plan as air quality meets attainment standards. Because the project makes improvements to existing water systems designed to remediate an existing health hazard, it would not result in population growth or long-term emissions. The project would not impact air quality plans.

b. Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

The LCAQMD is responsible for monitoring and reporting air quality data for the Lake County air basin. Both the U. S. Environmental Protection Agency and the California Air Resources Board have established ambient air quality standards for common pollutants. These ambient air quality standards represent safe levels that avoid specific adverse health effects associated with each pollutant, termed criteria pollutants.

As shown in the table below, the LCAQMD is designated to be in attainment or unclassified for all federal constituents [5]. The LCAQMD does not have any management plans as air quality meets attainment standards.

Standard	2023 State Status	2023 Federal Status
Ozone 8-Hour	Attainment	Unclassified/Attainment
Ozone 1-Hour	Attainment	N/A
PM2.5	Attainment	Unclassified/Attainment
PM10	Attainment	Unclassified
Carbon Monoxide	Attainment	Unclassified/Attainment
Nitrogen Dioxide	Attainment	Unclassified/Attainment
Sulfur Dioxide	Attainment	Unclassified
Sulfates	Attainment	N/A
Lead	Attainment	Unclassified/Attainment
Hydrogen Sulfide	Attainment	N/A
Visibility Reducing Particles	Attainment	N/A

Largely because the LCAQMD is not required to have a basin plan, it has not adopted its own thresholds of significance for project-related emissions. It is therefore useful to utilize thresholds from an immediately adjacent air quality district that has adopted such thresholds, as provided by Section 15064.7 of the CEQA Guidelines. For air quality impacts, the Yolo-Solano Air Quality Management District (YSAQMD) provides guidance in assessing project impacts on attainment status. The YSAQMD's 2013 Handbook for Assessing and Mitigating Air Quality Impacts[6] (Handbook) establish recommended thresholds of significance for criteria pollutants for project construction and operation for CEQA analysis. Because neither the District nor the LCAQMD has developed thresholds for air quality, the YSAQMD thresholds are utilized here to determine significance.

Table 2 of the YSAQMD's Handbook contains screening criteria for construction and operation of various project categories. These screening criteria identify projects that would be considered less than significant and would not need to conduct an air quality analysis. However, the thresholds do not include linear projects like pipelines. It is therefore necessary to model the emissions associated with the project.

The 2013 YSAQMD's thresholds contained in Table 1 of the Handbook are presented below with the CalEEMod results for the project following (converted from tons per year to pounds per day). The

[5] http://www.arb.ca.gov/desig/adm/adm.htm
[6] *https://www.ysaqmd.org/wp-content/uploads/Planning/CEQAHandbook2007.pdf*

CalEEMod did not include any mitigating measures and includes both phases of the project (a worst-case analysis).

YSAQMD Air Quality Thresholds of Significance (Project Level)		
	Construction Related	**Operational**
Pollutant	**Average Daily Emissions (lb/day)**	**Average Daily Emissions (lb/day)**
ROG	54	54
NOX	54	54
PM10 (Dust)	80	80
CO	Violation of a state ambient air quality standard for CO	

As shown in the table below, the project's construction-related emissions are modeled to be considerably lower than the YSAQMD's thresholds of significance. Long-term project operational emissions associated with the project would be essentially unchanged due to the replacement and improvement nature of the project and were not modeled as there is no potential that they would exceed the thresholds.

CalEEMod Results - Unmitigated		
	Construction Related	**Operational**
Pollutant	**Average Daily Emissions (lb/day)**	**Average Daily Emissions (lb/day)**
ROG	0.2	N/A
NOX	2	N/A
PM10	0.1	N/A
PM10/PM2.5 (fugitive dust)	0.1	N/A
CO	4	N/A

Construction activities associated with the project have the potential to create localized short-term dust impacts (PM10 and PM2.5). The YSAQMD Handbook indicates that "most land use projects require some earthmoving during the project's construction phase. Without control, dust emissions from grading, trenching, or land clearing can create nuisances or localized health impacts. Actual pounds per day of dust generated by project construction can be calculated with URBEMIS [since replaced by CalEEMod]. However, even projects not exceeding district PM [particulate matter or dust] thresholds should implement best management practices to reduce dust emissions and avoid localized health impacts. Best management practices for dust can be found in Section 6.1 of" the Handbook. Because the District is utilizing the YSAQMD Handbook to establish thresholds, it is prudent to include the applicable measures contained in Table 5 of Section 6.1 for reducing dust. Mitigation Measure Air Quality 1 (AQ1) includes those relevant best management practices (BMPs) as recommended by the YSAQMD Handbook.

c. Would the project expose sensitive receptors to substantial pollutant concentrations?

As a water infrastructure improvement project for two existing water systems, ongoing operation of the water systems would not alter air quality in any appreciable way and would not expose sensitive receptors to substantial pollutant concentrations. During the construction of the project, generation of dust and equipment exhaust can be expected to increase. A portion of this dust would contain PM10 and PM2.5, which are criteria air pollutants regulated at both the federal and state levels. Diesel particulate matter would be emitted by construction equipment and trucks. Equipment operation and trucks also emit nitrogen oxides during construction that contribute to regional ozone levels.

Although demolition, grading and construction activities associated with the project would be temporary and below Yolo Handbook thresholds, they would have the potential to cause both nuisance and health air quality impacts. PM10 is the pollutant of greatest concern associated with dust. Construction activities in the project area could impact residents within and adjacent to the community and schools, both considered sensitive receptors. As indicated in the YSAQMD, BMPs for dust control should be applied regardless of threshold to reduce the potential of localized health impacts. Based on the linear nature of the project (water main installation), construction in any one vicinity would only be for a short duration, limited to a few days, to excavate a trench, install the water main, and backfill the trench. Despite the limited duration and dust being under the YSAQMD threshold, implementation of YSAQMD BMPs contained in mitigation measure AQ1 will further reduce potential air quality impacts associated with exposing sensitive receptors to pollutant concentrations, consistent with the YSAQMD Handbook.

d. Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The project would not create objectionable odors or other emissions. The project includes installation and replacement of water distribution pipelines and other water system infrastructure that are not associated with creation of odors.

Cumulative Impacts

There are no adverse cumulative environmental impacts to air quality resulting from implementation of the proposed project.

Mitigation Measures

AQ1

The following best management practices, as described by the Yolo-Solano Air Quality Management District 2013 Handbook for Assessing and Mitigating Air Quality Impacts shall be implemented during construction to minimize fugitive dust and emissions:

- Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Haul trucks shall maintain at least 2 feet of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant vegetative ground cover (hydroseed with native mix) in disturbed areas as soon as possible.
- Cover inactive storage piles.

- Sweep streets if visible soil material is carried out from the construction site.
- Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips, mulch, or gravel.

IV BIOLOGICAL RESOURCES

Sol Ecology, Inc. prepared a biological resources report for the project. The purpose of the biological assessment is to review the project in sufficient detail to determine to what extent the proposed action may affect any endangered or threatened species or designated critical habitats and to gather information necessary to complete a review of potential biological resource impacts from development of the proposed project, under CEQA. The Sol Ecology report describes the results of the site survey and assessment of the project area for the presence of sensitive biological resources protected by local, state, and federal laws and regulations. Excerpts of the report are contained in this section[7].

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?	□	■	□	□
b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?	□	■	□	□
c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	□	■	□	□
d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	□	□	□	■
e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	□	□	□	■
f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	□	□	□	■

[7] *Biological Resources Report, Meadow Pointe/ULCWD Consolidation Project, Lake County, CA*. Sol Ecology, Inc. March 10, 2025.

Environmental Setting

METHODS

On November 26, 2024, the project area was traversed on foot to determine the presence of (1) plant communities both sensitive and non-sensitive, (2) special status plant and wildlife species, and (3) presence of essential habitat elements for any special-status plant or wildlife species.

A desktop analysis was performed to evaluate whether special status species or other sensitive biological resources (e.g., wetlands) could occur in the study area and vicinity. Sol Ecology biologists reviewed the following:

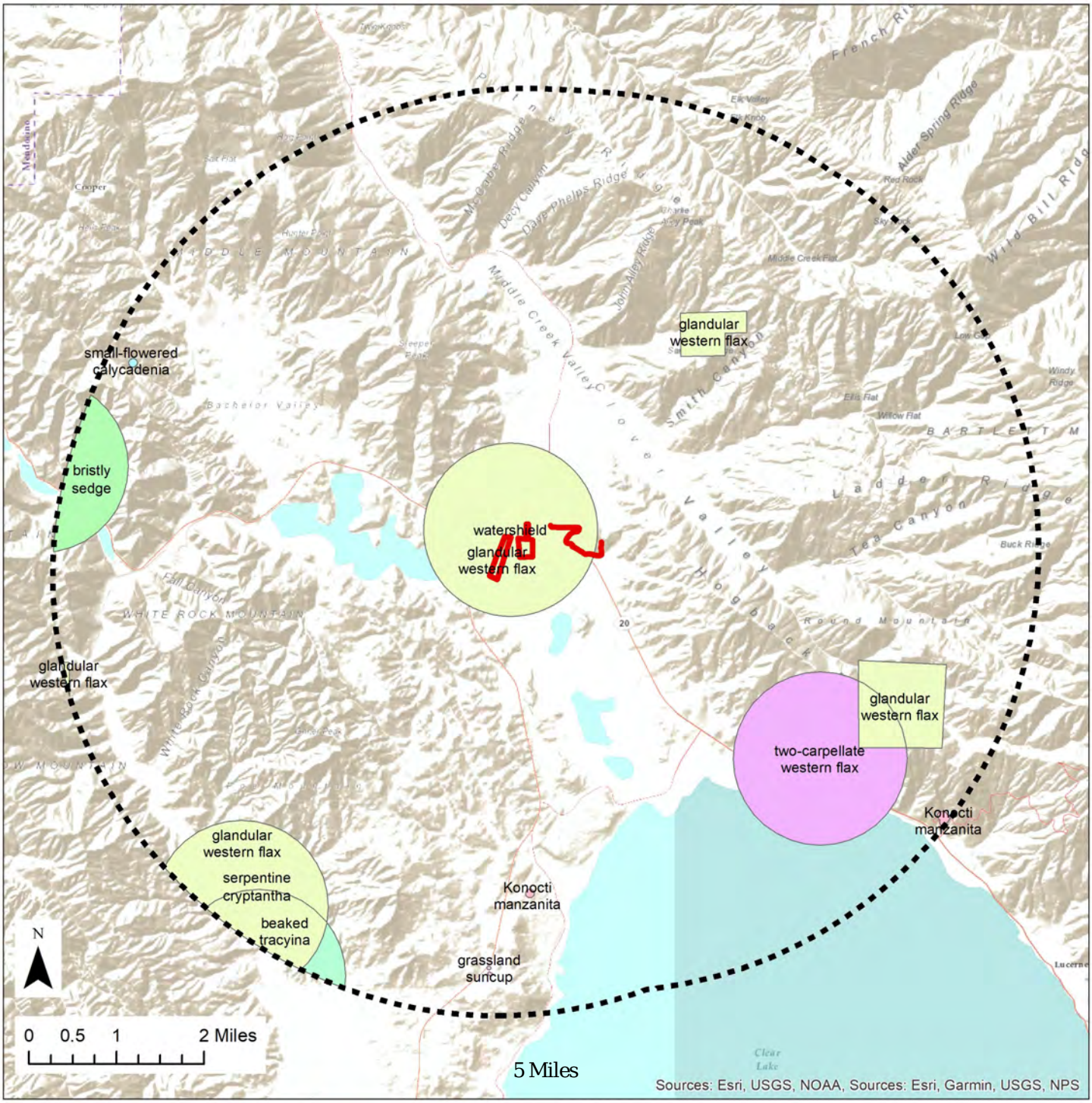
- California Native Plant Society's (CNPS's) A Manual of California Vegetation Online Edition (CNPS 2024a)
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory, Wetlands Mapper (USFWS 2024a)
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey (USDA 2024
- CNPS's Inventory of Rare and Endangered Plants of California search for USGS 7.5- minute Upper Lake quadrangle and eight adjacent quadrangles (CNPS 2024b)
- California Natural Diversity Database (CNDDB) search for USGS 7.5-minute Upper Lake quadrangle and eight adjacent quadrangles (CDFW 2024, Appendix E)
- USFWS Information for Planning and Conservation Species Lists (USFWS 2024b; Appendix E)
- California Department of Fish and Game (CDFG) publication "California's Wildlife, Volumes I-III" (Zeiner et al. 1990)
- CDFG publication California Bird Species of Special Concern (Shuford and Gardali 2008)
- California Department of Fish and Wildlife (CDFW) and University of California Press publication California Amphibian and Reptile Species of Special Concern (Thomson et al. 2016)
- A Field Guide to Western Reptiles and Amphibians (Stebbins 2003)
- Western Bat Working Group (WBWG) Online Species Accounts (WBWG 2015).

Based on information from the above sources, Sol Ecology developed lists of special-status species and natural communities of special concern that could be present in the project vicinity. Figure IV-1 presents special-status plant species and Figure IV-2 presents special-status animal species from the results of a 5-mile CNDDB record search around the project area. All biological resources were evaluated for their potential to occur within the project area.

Sol Ecology biologists assessed the project area on November 26, 2024, for the presence of sensitive biological communities, including riparian areas, sensitive plant communities recognized by CDFW, and habitat connectivity corridors. Sensitive communities were identified following A Manual of California Vegetation, Online Edition. However, in some cases it is necessary to identify variants of community types or to describe non-vegetated areas that are not described in the literature. Biological communities were classified as sensitive or non-sensitive as defined by CEQA and other applicable laws and regulations.

Figure IV-1: Special Status Plant Species within 5 Miles of the Project Site

Meadow Pointe/ULCWD Consolidation Project, Upper Lake, CA



Project Study Area
5-Mile Buffer
Konocti manzanita (2)
beaked tracyina (1)
bristly sedge (1)
glandular western flax (5)
grassland suncup (1)
serpentine cryptantha (1)
small-flowered calycadenia (1)
two-carpellate western flax (1)
watershield (1)

Date: 01-15-2025
Data: Sol Ecology Inc., Lake Co. CDFW

Base: ESRI
GIS: LM2445

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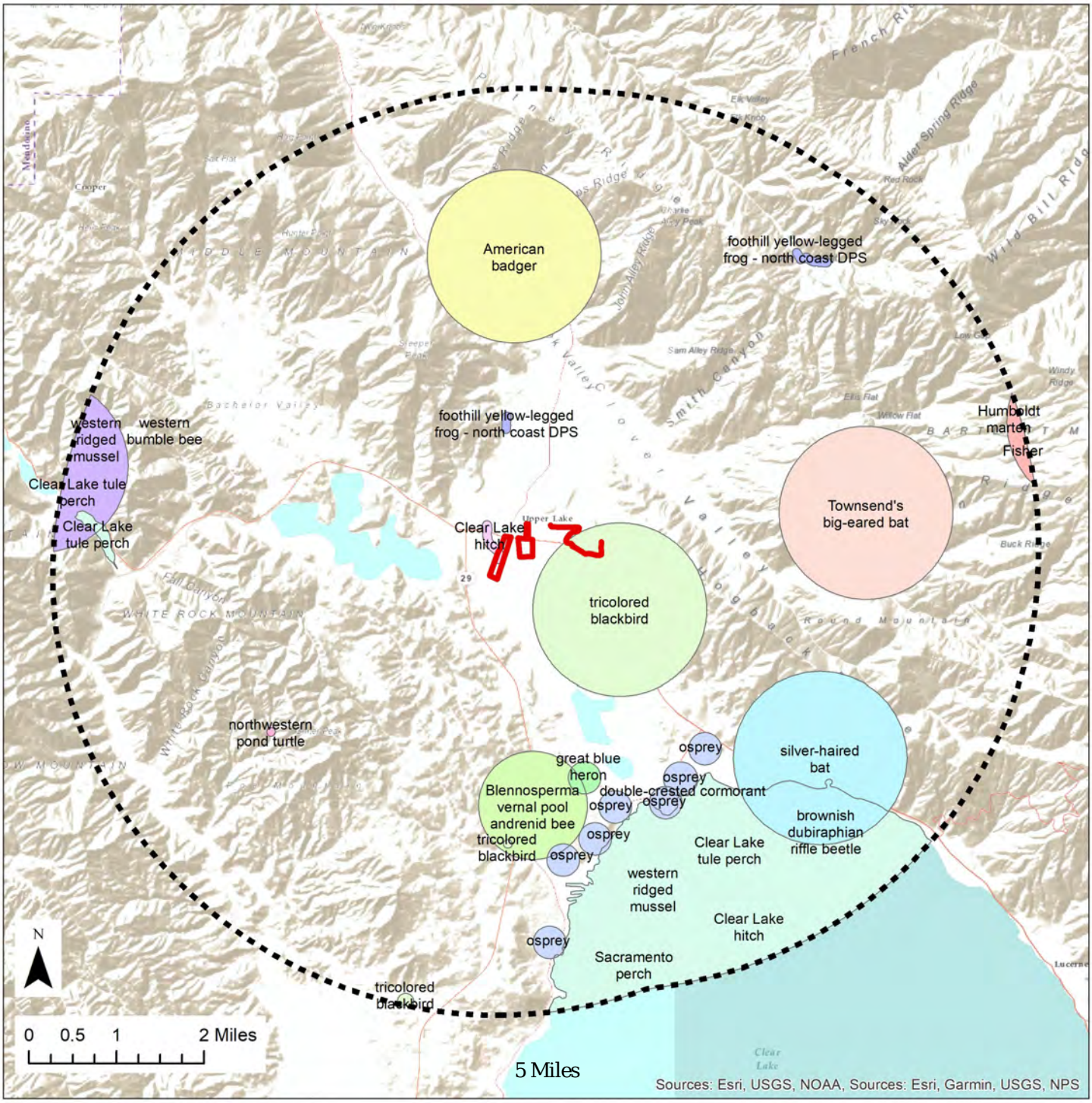
Figure IV-2: Special Status Animal Species within 5 Miles of the Project Site

Meadow Pointe/ULCWD Consolidation Project, Upper Lake, CA



Project Study Area
5-Mile Buffer
American badger (1)
Blennosperma vernal pool andrenid bee (1)
Clear Lake hitch (2)
Clear Lake tule perch (3)
Fisher (1)
Humboldt marten (1)
Sacramento perch (1)
Townsend's big-eared bat (1)
brownish dubiraphian riffle beetle (1)
double-crested cormorant (1)
foothill yellow-legged frog - north coast DPS (2)
great blue heron (1)
northwestern pond turtle (1)
osprey (7)
silver-haired bat (1)
tricolored blackbird (3)
western bumble bee (1)
western ridged mussel (2)

Date: 01-15-2025
Data: Sol Ecology Inc., Lake Co., CDFW

Base: ESRI
GIS: LM2445

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The project area was also surveyed to determine if any wetlands and waters potentially subject to jurisdiction by the U.S Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), or CDFW are present. This preliminary assessment was based primarily on the presence of wetland plant indicators, hydrology or wetland soils. A preliminary aquatic features assessment was based on the presence of unvegetated, ponded areas or flowing water, or evidence indicating their presence such as a high-water mark or a defined drainage course.

Reconnaissance-level surveys for special status species on and adjacent to the project area were also performed on November 26, 2024. The focus of the surveys was to identify whether suitable habitat elements for each of the special status species documented in the surrounding vicinity are present on the project area or not and whether the project would have the potential to result in impacts to any of these species and/or their habitats either on- or off-site. Habitat elements examined for the potential presence of sensitive plant species included: soil type, elevation, vegetation community, and dominant plant species. For wildlife species, habitat elements examined included the presence of dispersal habitat, foraging habitat, refugia or estivation habitat, and breeding (or nesting) habitat. No protocol-level surveys were performed.

In cases where little information is known about species occurrences and habitat requirements, the species evaluation was based on best professional judgment of Sol Ecology biologists with experience working with the species and habitats. If a special-status species was observed during the site visit, its presence was recorded and discussed. For some threatened and endangered species, a site survey at the level conducted for this report may not be sufficient to determine presence or absence of a species to the specifications of regulatory agencies.

Sensitive and non-sensitive vegetation community types as described below are mapped on Figure IV-3. Natural communities considered sensitive are those identified in local or regional plans, policies, regulations, or by the CDFW. Sensitive vegetation alliances are ranked 1 through 5 based on NatureServe's methodology, with those alliances ranked globally (G) or statewide (S) as 1 through 3 considered sensitive. Impacts to sensitive natural communities identified in local or regional plans, policies, or regulations or those identified by the CDFW, or USFWS must be considered and evaluated under CEQA.

Elevations in the project area range from approximately 1,335 to 1,500 feet above mean sea level. The project area encompasses four soil map units identified by the USDA, NRCS (USDA 2019): Lupoyoma silt loam, protected; Neice-Sobrante-Hambright complex, 15 to 30 percent slopes; Wappo variant clay loam, 2 to 8 percent slopes; and, Riverwash.

EXISTING CONDITIONS, VEGETATION COMMUNITIES, AND GENERAL WILDLIFE USE

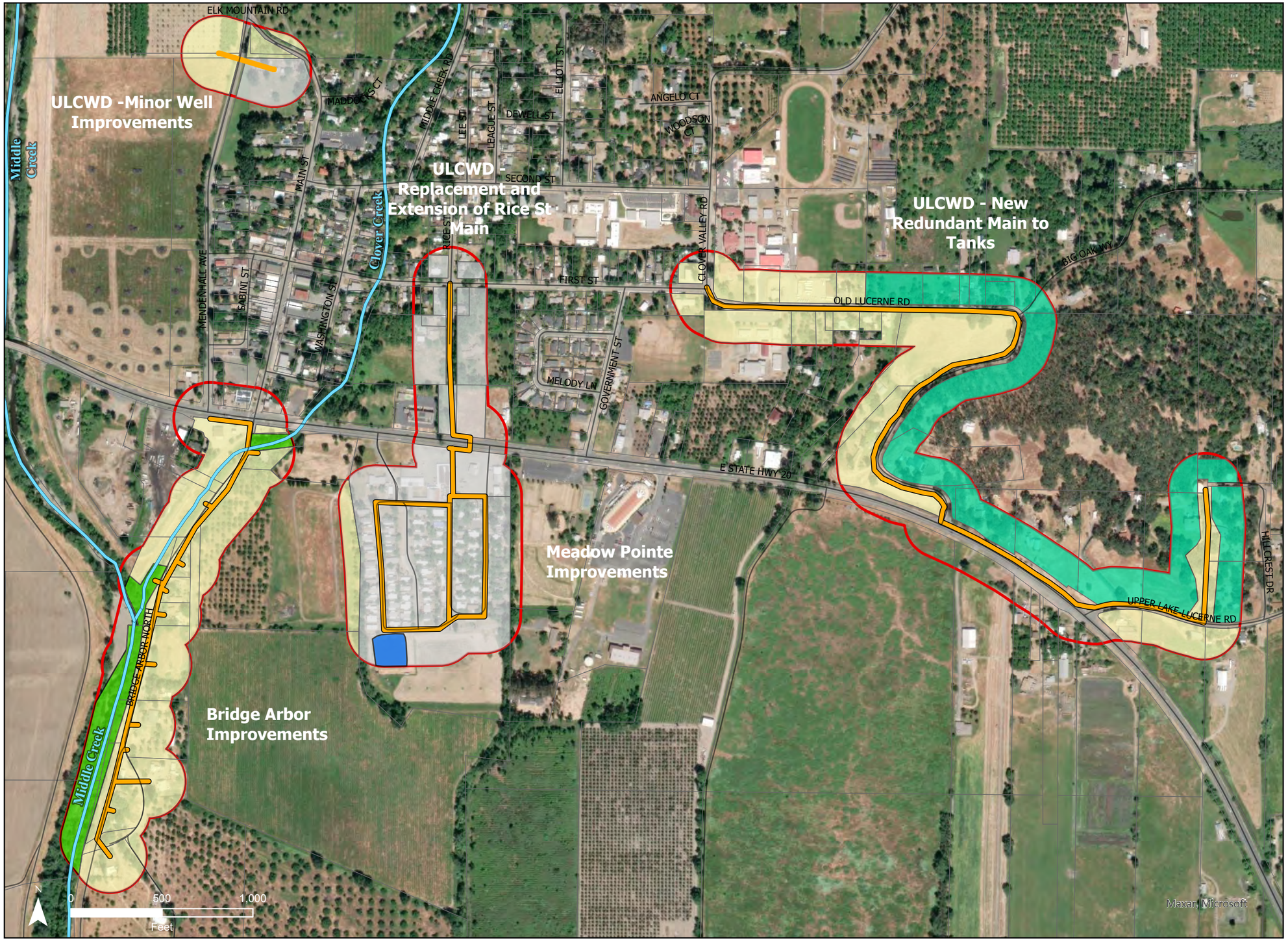
The following vegetation communities were observed in the project area during the site visit. Locations of communities are shown on Figure IV-3.

Ruderal/Developed

Throughout the majority of the project area, the dominant vegetation type is ruderal, dominated by locally varying guilds of non-native, early successional plant species in conjunction with a wide range of co-occurring species that generally reflect recent land use history, from margins of remnant native woody perennials or often overlapping and interfacing with housing, sidewalks, businesses, and other infrastructure associated with varying degrees of development. While associated species differed in assemblage throughout different portions of the project area, non-native grasses and forbs such as slim oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), Bermuda grass (*Cynodon dactylon*), dwarf mallow (*Malva neglecta*) and mustard (*Hirschfeldia incana*) were common and abundant.

Figure IV-3: Vegetation Communities

Meadow Pointe/ULCWD Consolidation Project, Upper Lake, CA



Vegetation Communities

- Aroyo Willow Thicket
- Blue Oak Woodland
- Ruderal
- Urban/Ruderal

- Surveyed Area
- Parcel Boundary
- Pond
- Project Area
- Stream
- Roads

Projected Coordinate System: NAD 1983 (2011)
StatePlane California II FIPS 0402 (US Feet)
Projection: Universal Transverse Mercator
Datum: North American 1983
Base: ESRI
Data: Sonoma Co., Sol Ecology Inc.
Date: 3-5-2025
GIS: AG2445.2 coms 1

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For the Rice Street portion of the alignment, the southern portion passes through a mixed use, vegetated lot that had some remnant mature native trees like valley oak (*Quercus lobata*), Northern California black walnut (*Juglans hindsii*) and Western redbud (*Cercis occidentalis*), as well as a number of non-native ornamental trees including hawthorn (*Crataegus monogyna*), cherry (*Prunus* sp.), mulberry (*Morus* sp.) and cedar (*Thuja* sp.). The Meadow Point portion of the alignment runs through an existing mobile home park, where many of the dominant plants are ornamentals that have either been planted intentionally in place or escaped cultivation and recruited along vegetated margins. Non-native, ornamental trees and shrubs such as glossy privet (*Ligustrum lucidum*), olive (*Olea europea*), silver dollar gum (*Eucalyptus polyanthemos*), red iron bark (*Eucalyptus sideroxylon*), Italian cypress (*Cupressus sempervirens*), lemon (*Citrus* sp.) and firethorn (*Pyracantha coccinea*) are common throughout portions of Meadow Point, typically with sparse associated herbaceous cover, generally consisting of cosmopolitan non-native forbs like common plantain (*Plantago major*), canarygrass (*Phalaris canariensis*), annual blue grass (*Poa annua*) and coastal heron's bill (*Erodium cicutarium*). There is no global or state ranking applied to the ruderal/developed land cover type, and this would not be considered a sensitive vegetation community.

Arroyo willow thickets (Salix lasiolepis Shrubland Alliance)

A narrow belt of arroyo willow thicket type vegetation is present within the Bridge Arbor portions of the project area, south of the confluence of Middle Creek and Clover Creek, and present along the southernmost portions of Clover Creek prior to where it joins Middle Creek. This vegetation type is typically associated with stream banks and benches, and in this case, it corresponds with the relatively steep banks along the side of Middle Creek. On the slopes below top of bank, a dense layer of arroyo willow (*Salix lasiolepis*) dominates much of the emergent woody vegetation. Occasional native trees such as California bay (*Umbellularia californica*), Oregon ash (*Fraxinus latifolia*), boxelder maple (*Acer negundo*), red willow (*Salix laevigata*) and Fremont cottonwood (*Populus fremontii*) are present at patchy intervals, as well as the arborescent shrub American dogwood (*Cornus sericea*). Along the slopes associated with Middle Creek, non-native species were represented by variably dense patches of harding grass (*Phalaris aquatica*), Himalayan blackberry (*Rubus armeniacus*), reed fescue (*Festuca arundinacea*), teasel (*Dipsacus sativus*) and white horehound (*Marrubium vulgare*). Along the top of the bank, and in the upland margins of the road associated with Bridge Arbor, a disturbed annual grassland/ruderal vegetation assemblage was observed, dominated by non- native grasses and forbs like slim oat (*Avena barbata*), ripgut brome (*Bromus diandrus*), mustard (*Hirschfeldia incana*), periwinklke (*Vinca major*), and field hedge parsley (*Torilis arvensis*). This alliance is ranked G4/S4 and is not a sensitive vegetation community; however, this vegetation community is associated with Clover Creek (also known as riparian habitat) which is a potentially jurisdictional aquatic feature and as such, is protected under Section 1600 of the Fish and Game Code and the Porter Cologne Act.

Blue oak woodland (Quercus douglasii Woodland Alliance)

Blue oak woodland is present along the eastern slopes above the southeastern portions of Old Lucerne Road, and on the slopes above the western side of Hillcrest Drive. These areas are dominated by blue oak (*Quercus douglasii*) with occasional gray pine (*Pinus sabiniana*) interspersed. The shrub layer was relatively sparse, consisting of occasional mature individuals of common manzanita (*Arctostaphylos manzanita ssp. manzanita*), coyote brush (*Baccharis pilularis*) and poison oak (*Toxicodendron diversilobum*). Although many forbs and annual grasses would not be readily detectable during the time of year that the survey was performed, the native California bottle-brush grass (*Elymus californicus*) and blue wild rye (*Elymus glaucus*) were abundant in the understory/herbaceous layer. In more densely shaded areas, there were several individuals of common snowberry (*Symphoricarpos albus*) and goldback fern (*Pentagramma triangularis*). Along the margins of the woodland, in more disturbed areas closer to the road, weedy non-native annual grasses such as ripgut brome (*Bromus diandrus*) and bristly dogtail grass (*Cynosurus echinatus*) were fairly abundant.

Along a narrow swath of the northern portion of Highway 20 and Upper Lake Lucerne Road, the oak woodland grades into more of a disturbed grassland type of environment, likely maintained as such due to factors such as proximity to the highway, visible signage, or other utilitarian purposes. While this stretch of grassland is characteristically disturbed in nature, some of the native herbaceous species associated with grassy openings in blue oak woodland are still present in small clusters, including Cleveland's tarweed (*Hemizonia congesta ssp. clevelandii*) and blue wildrye (*Elymus glaucus*). This alliance is ranked G4/S4 and is not a sensitive vegetation community; where present in close proximity to state waters, it may be subject to regulation under Section 1600 of the Fish and Game Code.

Potentially Jurisdictional Aquatic Features

Within the project area, two jurisdictional features are present: Middle Creek (a perennial stream) and Clover Creek, an intermittent stream tributary to Middle Creek. Middle Creek eventually drains into Clear Lake. Both creeks support arroyo willow riparian vegetation, as described previously. Middle Creek within the project area varies from between 6 to 10 feet in width, while the width of Clover Creek was between 3 to 5 feet; Clover Creek is largely channelized within the project area. Water was observed in both creeks at the time of the site assessment. Pool and rifle habitat was noted, and bed substrate was gravel, with gravel bars noted in Middle Creek only. Both Middle Creek and Clover Creek are jurisdictional aquatic features subject to the regulation of the USACE up to the ordinary high-water mark and the RWQCB and CDFW up to the top of bank or the edge of riparian dripline, whichever is greater.

Additionally, a man-made pond is present near the southwest corner of Meadow Pointe Residential Park; a wetland fringe consisting of tall, dense tules is present around the perimeter. This feature is a potential Waters of the State.

Special-Status Plants

Special-status species include those plants and wildlife species that have been formally listed, are proposed as endangered or threatened, or are candidates for such listing under the Federal Endangered Species Act (ESA) or California Endangered Species Act (CESA). These acts afford protection to both listed species and those that are formal candidates for listing. Plant species on the CNPS Rare and Endangered Plant Inventory with California Rare Plant Ranks of 1 and 2 are also considered special-status plant species and must be considered under CEQA.

Based upon a review of the resources and databases, nine special-status plant species have been documented within a five-mile radius of the project area, as shown on Figure IV-1: Konocti manzanita, beaked tracyina, bristly sedge, glandular western flax, grassland suncup, serpentine cryptantha, small-flowered calycendenia, two-carpellete western flax and watershield. These are further assessed in Table IV-1. None are federal and/or state listed species. Based on biological communities described above and soils found throughout the site, as well as both historic and recent site disturbance, the project area is unlikely to support any special status plant species. No federal or state listed plant species are likely to be present primarily due to the absence of vernal pool habitat (Boggs Lake hedge hyssop or Burke's goldfields). Further, all the proposed work activities will be performed within existing developed or otherwise anthropically disturbed areas.

TABLE B1. Special Status Plant Species Potentials Table

Scientific Name/ Common Name	Status[1]	Habitat	Blooming Period	Potential for Occurrence
Amsinckia lunaris Bent-flowered fiddleneck	1B.2	Gravelly slopes, grassland, openings in woodland, often serpentine; 50–800 m	Mar-Jun	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Anisocarpus scabridus Scabrid alpine tarplant	1B.3	Open ridges or slopes on metamorphics; 1,600-2,400 m	Jun-Sep	**No potential.** Scabrid alpine tarplant occurs at elevations significantly greater than those observed within the Project Study Area. Similarly, appropriate habitat and edaphic conditions to support the species are absent.
Arctostaphylos manzanita ssp. *elegans* Konocti manzanita	1B.3	Chaparral, cismontane woodland, lower montane coniferous forest; volcanic soils; 220-1,850 m	Feb-May	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (rocky, shallow soils; volcanics).
Arctostaphylos stanfordiana ssp. *raichei* Raiche's manzanita	1B.1	Chaparral; 400-945 m	Feb-Apr	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (shallow, rocky soils).
Boechera ultraalsa Snow Mountain rockcress	1B.1	Rocky soil; +/- 1,800 m	Jun-Jul	**No potential.** The Project Study Area lacks appropriate edaphic conditions (shallow, rocky) and elevations.
Brasenia schreberi Watershield	2B.3	Ponds, slow streams; < 2,200 m	Apr-Oct	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Calycadenia micrantha Small-flowered calycadenia	1B.2	Dry, open rocky ridges, hillsides, talus; openings in scrub, woodland; 500-1,500 m	Jun-Oct	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (shallow, rocky, soils; steep slopes).
Camissonia lacustris Grassland suncup	1B.2	Open grassland; 200-1,600 m	Apr-Jun	**No potential.** The Project Study Area lacks appropriate habitat. While there are several marginal areas that are dominated by grasses, they are ruderal/disturbed in nature and dominated by non-native annual grass species. Grassland suncup requires in-tact, native, predominantly perennial grassland habitat.
Carex comosa Bristly sedge	2B.1	Wet places; < 400 m	Jul-Sep	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Ceanothus confusus Rincon Ridge ceanothus	1B.1	Closed-cone coniferous forest, chaparral, cismontane woodland, pine/oak woodland; usually on	Feb-Apr	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine and volcanics).

Scientific Name/ Common Name	Status[1]	Habitat	Blooming Period	Potential for Occurrence
		volcanic or serpentinite soils; 75-1,100 m		
Cryptantha dissita Serpentine cryptantha	1B.2	Rocky outcrops, gravelly slopes, serpentine endemic, chaparral, foothill woodland; 150-900 m	Mar-Jun	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Cuscuta jepsonii Jepson's dodder	1B.2	On *Ceanothus diversifolius*, *Ceanothus prostratus*; 1,200-2,300 m	Jul-Sep	**No potential.** Jepson's dodder is a holo-parasite on *C. diversifolius* and *C. prostratus*, neither of which occur in the Project Study Area
Downingia willamettensis Cascade downingia	2B.2	Edges of lakes, ponds, vernal pools; < 200 m (650 m)	Jun-Jul	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Epilobium nivium Snow Mountain willowherb	1B.2	Dry talus, shaly slopes; 1,500-2,400 m	Jul-Sep	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (shallow, rocky soils; steep slopes).
Gratiola heterosepala Boggs Lake hedge-hyssop	CE 1B.2	Shallow water, margins of vernal pools; < 1,600 m	Apr-Sep	**No potential.** The Project Study Area lacks appropriate vernal pool habitat as well as hydrological context.
Hesperolinon adenophyllum Glandular western flax	1B.2	Serpentine, chaparral; 150-1,000 m	May-Aug	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Hesperolinon bicarpellatum Two-carpellate western flax	1B.2	Serpentine, chaparral; 60-1,000 m	May-Jul	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Hesperolinon drymarioides Drymaria-like western flax	1B.2	Serpentine, chaparral or woodland; 100-1,000 m	May-Jul	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Horkelia bolanderi Bolander's horkelia	1B.2	Edges of vernally wet places in pine forest; 450-1,100 m	May-Sep	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Kopsiopsis hookeri Small groundcone	2B.3	Open woodland, mixed conifer forest, generally on *Gaultheria shallon*, occasionally on *Arbutus menziesii*, *Arctostaphylos uva-ursi*; < 700 m	Apr	**No potential.** The Project Study Area lacks appropriate habitat. Further, small groundcone is a holoparasite, and none of the species that are its hosts occur in the immediate area.
Lasthenia burkei Burke's goldfields	FE, CE	Meadows and seeps (mesic), and vernal pools; 15 to 600 meters.	Apr-May (June)	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.

Scientific Name/ Common Name	Status[1]	Habitat	Blooming Period	Potential for Occurrence
Layia septentrionalis Colusa layia	1B.2	Serpentine or sandy soils; 100-900 m	Apr-Jun	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine, sandy soils).
Lupinus antoninus Anthony Peak lupine	1B.2	Open fir forest; +/- 2,000 m	Jun-Jul	**No potential.** The Project Study Area lacks appropriate habitat and elevations to support this species. Similarly, Anthony Peak lupine is considered a near-site endemic, restricted to the higher elevations of Anthony Peak in Mendocino National Forest.
Plagiobothrys lithocaryus Mayacamas popcornflower	1A	Moist sites; 300-450 m	Apr-May	**No potential.** Presumed to be extinct. Further, the Project Study Area lacks appropriate habitat and hydrological conditions to support this species.
Potamogeton zosteriformis Eel-grass pondweed	2B.2	Ponds, lakes, streams; < 1,300 m	Jun-Jul	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Sidalcea oregana ssp. *hydrophila* Marsh checkerbloom		Wet soils of streambanks, meadows; 440-2,300 m	Jul-Sep	**No potential.** The Project Study Area lacks appropriate habitat and hydrological conditions.
Silene bolanderi Bolander's catchfly	1B.2	Serpentine and non-serpentine soils, oak, conifer woodland; < 1,000 m	Spring	**No potential.** The Project Study Area lacks appropriate habitat. Although occurrences have been noted off of serpentine soils, it is typically considered an obligate serpentine species, and is only known to occur within contiguous, more or less in-tact woodland environments.
Streptanthus glandulosus ssp. *hoffmanii* Hoffman's bristly jewelflower	1B.3	Serpentine outcrops; 125 m	May-Jul	**No potential.** The Project Study Area lacks appropriate habitat and edaphic conditions (serpentine).
Tracyina rostrata Beaked tracyina	1B.2	Grassy slopes; 100-400 m	May-Jun	**No potential.** The Project Study Area lacks appropriate habitat.
Viburnum ellipticum Oval-leaved viburnum	2B.3	Chaparral, yellow-pine forest, generally north-facing slopes; 300-1,400 m	Jun-Aug	**No potential.** The Project Study Area lacks appropriate habitat.

[1] FE/FT – Federally endangered/ threatened
CE/CT – California endangered/threatened
California Rare Plant Rank
1A – Plants presumed extirpated in California and either rare or extinct elsewhere.
1B – Plants rare, threatened, or endangered in California and elsewhere.
2A – Plants presumed extirpated in California but common elsewhere.
2B – Plants rare, threatened, or endangered in California but more common elsewhere.

Other special status species documented in the area are unlikely or have no potential to occur in the project area based on one or more of the following reasons:

- Hydrologic conditions (e.g., lake, pond, stream, vernal pool, meadow) necessary to support the special-status plants do not exist on site (e.g., for Cascade downingia, Bolander's horkelia, Boggs Lake hedge-hyssop, watershield).
- Edaphic (soil) conditions (e.g., rocky outcrops or talus slopes, serpentine, volcanic soils) necessary to support the special-status plants do not exist on site (e.g., for bent-flowered fiddleneck, Konocti manzanita, two-carpellate western flax, glandular western flax, Anthony Peak lupine).

Associated vegetation communities (e.g., chaparral, mixed conifer forest, open fir forest) necessary to support the special-status plants do not exist on site (e.g., for Brandegee's eriastrum, Viburnum ellipticum. Raiche's manzanita, Grassland suncup, Colusa layia).

Special Status Wildlife

In addition to wildlife listed as federal or state endangered and/or threatened, CDFW Species of Special Concern, CDFW California Fully Protected species, USFWS Birds of Conservation Concern, and medium and high priority are all considered special-status species. Although these species generally have no special legal status, they are given special consideration under CEQA. The federal Bald and Golden Eagle Protection Act also provides broad protection to both eagle species that are roughly analogous to those of listed species. Bat species are also evaluated for conservation status by the Western Bat Working Group (WBWG), a non-governmental entity; bats named as a "High Priority" or "Medium Priority" species for conservation by the WBWG are typically considered special status and also considered under CEQA; both common and special status maternity and hibernation bat roosts are protected under CFGC. In addition to regulations for special status species, most native birds in the United States (including non-status species) are protected by the federal Migratory Bird Treaty Act of 1918 (MBTA) and the CFGC, i.e., sections 3503, 3503.5 and 3513. Under these laws, deliberately destroying active bird nests, eggs, and/or young is illegal.

Fourteen (14) special-status wildlife species have been documented within a five-mile radius of the project area, as shown on Figure IV-2. The nine species with no or low potential to occur are described in Table IV-2 below. Based on the presence of biological communities described above, the project area has the potential to support eight special status species, three (3) of which are federal and/or state listed, as shown on Table IV-3. The site also provides suitable nesting substrate for many other species of birds and bats protected under the Migratory Bird Treaty Act (MBTA) and/or CFGC.

The remaining species found in the review of background literature were determined to be unlikely to occur due to absence of suitable habitat elements in and immediately adjacent to the project area. Habitat elements that were evaluated but found to be absent from the immediate area of the project area or surrounding habitats subject to potential indirect impacts include the following:

- Old-growth coniferous forest (e.g., for northern spotted owl).
- Proximity to coniferous forest, undisturbed tree cavities, or structures suitable for bat roosting (e.g., for silver haired bat and Townsend's big-eared bat).
- Proximity to large trees, cliffs, or structures (e.g., golden eagle, bald eagle, and osprey).

Table B2. Federal/State Protected Wildlife Species Potentials Table

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Invertebrates			
Bombus occidentalis Western bumblebee	SCE	Formerly common throughout much of western North America; populations from southern British Columbia to central California have nearly disappeared. Occurs in a wide variety of habitat types. Nests are constructed annually in pre-existing cavities, usually on the ground (e.g. mammal burrows). Many plant species are visited and pollinated.	**No Potential.** The Project Study Area is located outside of the current known occupied range of this species. Additionally, little to no suitable nest habitat is located within the Project Study Area.
Danaus plexippus plexippus pop. 1 Monarch – California overwintering population	FPT	Winter roost sites extend along the coast from northern Mendocino to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine, Monterey cypress), with nectar and water sources nearby. Larval host plant for monarch is milkweed (*Asclepias* spp.) and can occur in both urban and rural areas. This species forages on a number of flowering plants within breeding areas.	**No Potential.** The Project Study Area is outside of the coastal zone which provides suitable overwintering habitat for this species, and no host plants were observed.
Fish			
Oncorhynchus mykiss irideus pop. 48 and 49 Steelhead – northern California coast DPS summer-run	FT, SE	Requires beds of loose, silt-free, well-oxygenated coarse gravel for spawning. After hatching, juveniles spend at least one summer in the freshwater rearing areas, so the stream must have either perennial flow or cool intermittent pools with subsurface flow, shade, food, and shelter during the dry season.	**No Potential.** No perennial streams which drain to the ocean are located within the Project Study Area.
Lavinia exilicauda chi Clear Lake hitch	FPT, ST	Found only in Clear Lake, Lake County, and associated ponds. Spawns in streams flowing into Clear Lake. Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in vegetation.	**Moderate Potential.** There is one CNDDB occurrence of this species within 5 miles of the Project Study Area. Middle Creek and Clover Creek potentially provide suitable spawning habitat for this species, as both drain to Clear Lake.

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Reptiles and Amphibians			
Rana draytonii California red-legged frog	FT, SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Associated with quiet perennial to intermittent ponds, stream pools and wetlands. Prefers shorelines with extensive vegetation. Disperses through upland habitats after rains.	**No Potential.** The closest documented CNDDB occurrence of this species is located more than 11 miles to the southeast in Kelsey Creek in 1956. This is well outside the maximum overland dispersal distance of this species.
Actinemys marmorata Northwestern pond turtle	FPT, SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Require basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Low Potential.** There is one CNDDB occurrence of this species within 5 miles of the Project Study Area. Middle Creek and Clover Creek alongside Bridge Arbor North, as well as the pond south of Meadow Pointe Residential Park may potentially provide suitable basking and foraging habitat for this species. No nesting habitat is located within the Project Study Area.
Birds			
Strix occidentalis caurina Northern spotted owl	FT, ST	Year-round resident in dense, structurally complex forests, primarily those with old-growth conifers. It nests in cavities or on platforms in large trees, preferentially inhabiting old growth forests, though it can be found in mixed primary- and secondary-growth forests in the southern part of its range (southern Oregon and California). Preys on mammals.	**No Potential.** No suitable conifer or mixed conifer-deciduous forest habitat is present within or near the Project Study Area.
Agelaius tricolor Tricolored blackbird	ST, SSC, BCC	Most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. It also uses flooded agricultural fields. Abundant insect prey near breeding areas is essential. Birds may forage up to 9 km (5.6 miles) from their breeding colonies.	**Low Potential.** Emergent vegetation along the margins of the pond south of Meadow Pointe Residential Park and along Clover Creek may potentially provide suitable nesting habitat for this species. Additionally, the project site(s) are within the known foraging distance of at least one presumed extant occurrence (as depicted in Appendix A, Figure 4). Ruderal grassland habitat within the Project Study Area provides marginal foraging habitat.

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Mammals			
Martes caurina humboldtensis Humboldt marten	FT, SE, SSC	Mixed evergreen forests with more than 40% crown closure along north coast in portions of Del Norte, Humboldt, and Siskiyou Counties. Needs a variety of different-aged stands, particularly old-growth conifers and snags which provide cavities for dens/nests.	**No Potential.** The Project Study Area is outside the current known range of this species. Additionally, suitable habitat for this species is absent from the Project Study Area.

[1] FE/SE – Federal/State Endangered FT/ST – Federal/State Threatened FPT – Federal Proposed Threatened
SCE – State Candidate Endangered SSC – CDFW Species of Special Concern BCC – Bird of Conservation Concern

Table 1. Special Status Wildlife with Potential to Occur in the Study Area

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Fish			
Lavinia exilicauda chi Clear Lake hitch	ST	Found only in Clear Lake, Lake County, and associated ponds. Spawns in streams flowing into Clear Lake. Adults found in the limnetic zone. Juveniles found in the nearshore shallow-water habitat hiding in vegetation.	**Moderate Potential.** There is one CNDDB occurrence of this species within 5 miles of the Project Study Area. Middle Creek and Clover Creek potentially provide suitable spawning habitat for this species, as both drain to Clear Lake.
Amphibians and Reptiles			
Rana boylii pop. 1 Foothill yellow-legged frog – North Coast DPS	SSC	Found in or near rocky streams in a variety of habitats. Prefers sunny, shallow streams and riffles with a rocky substrate; requires at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis. Feeds on both aquatic and terrestrial invertebrates.	**Low Potential.** There are multiple CNDDB occurrences of this species within 5 miles of the Project Study Area. Middle Creek and Clover Creek alongside Bridge Arbor North may potentially provide suitable basking, foraging, and breeding habitat for this species. This species may potentially be found in uplands within the Project Study Area, though this species rarely leaves the water's edge.
Actinemys marmorata Northwestern pond turtle	FPT, SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches with aquatic vegetation. Requires basking sites such as partially submerged logs, vegetation mats, or open mud banks, and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	**Low Potential.** There is one CNDDB occurrence of this species within 5 miles of the Project Study Area. Middle Creek and Clover Creek alongside Bridge Arbor North, as well as the pond south of Meadow Pointe Residential Park may potentially provide suitable basking and foraging habitat for this species. No nesting habitat is located within the Project Study Area, as such it is not likely to be found within the Project footprint.
Birds			
Dryobates nuttallii Nuttall's woodpecker	BCC	Year-round resident in lowland woodlands throughout much of California west of the Sierra Nevada. Typical habitat is dominated by oaks; also occurs in riparian woodland. Nests in tree cavities.	**Present.** Oak trees throughout the Project Study Area may potentially provide suitable nesting habitat for this species. This species was observed within the Project Study Area during the site assessment on November 26, 2024.

Table 1. Special Status Wildlife with Potential to Occur in the Study Area

Scientific Name/ Common Name	Status[1]	Habitat	Potential for Occurrence
Baeolophus inornatus Oak titmouse	BCC	Occurs year-round in woodland and savannah habitats where oaks are present, as well as riparian areas. Nests in tree cavities.	**Present.** Oak trees throughout the Project Study Area may potentially provide suitable nesting habitat for this species. This species was observed within the Project Study Area during the site assessment on November 26, 2024.
Icterus bullockii Bullock's oriole	BCC	Inhabit riparian and open woodlands, favoring areas where trees are large and spaced far apart. Nests primarily in sycamores, cottonwoods, willows, oaks, madrones, and large mesquite trees.	**Low Potential.** Trees throughout the Project Study Area may potentially provide suitable nesting habitat for this species.
Agelaius tricolor Tricolored blackbird	ST, SSC, BCC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. It also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	**Low Potential.** Emergent vegetation along the margins of the pond south of Meadow Pointe Residential Park may potentially provide suitable nesting habitat for this species. Additionally, the site(s) are within the known foraging distance of at least one presumed extant occurrence. Ruderal grassland habitat within the Project Study Area provides marginal foraging habitat.
Mammals			
western red bat *Lasiurus frantzii*	SSC, WBWG High	Highly migratory and typically solitary, roosting primarily in the foliage of trees or shrubs. Roosts are usually in broad-leaved trees including cottonwoods, sycamores, alders, and maples. Day roosts are common in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas.	**Low Potential**. Broadleaved trees were found in patches along Clover Creek; where present, western red bat may potentially roost during the non-winter season (typically from mid-April to mid-October). This species may maternity roost in the Project Study Area; this species is known to move pups from roost to another during the weaning period.

[1] FE/SE – Federal/State Endangered FT/ST – Federal/State Threatened FPT – Federal Proposed Threatened
SSC – Species of Special Concern BCC – Bird of Conservation Concern WBWG – Western Bat Working Group

Analysis

a. Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife (CDFW) or U.S. Fish and Wildlife Service (USFWS)?

The survey and assessment of the project area determined that the proposed project will have no effect on any federal or state listed species including: Boggs Lake hedge-hyssop (*Gratiola heterosepala*), Burke's goldfields (*Lasthenia burkei*), western bumblebee (*Bombus occidentalis*), monarch butterfly (*Danaus plexippus plexippus*), California coast steelhead DPS (*Oncorhynchus mykiss irideus*), Clear Lake hitch (*Lavinia exilicauda chi*), California red-legged frog *(Rana draytonii*), northwestern pond turtle (*Actinemys marmorata*), Northern spotted owl (*Strix occidentalis caurina*), or Humboldt marten (*Martes caurina humboldtensis*), nor any designated critical habitat for these or other species.

There are no special-status plant species and eight special-status animal species with the potential to be present, as indicated in the tables above. Potential impacts to these species are described below.

Special Status Plant Species

No special status plant species were determined to have potential to occur within the boundaries of the project area. Further, no special status species were observed during the November 2024 site assessment. Although the project area runs through portions of blue oak woodland habitat, which could potentially support several special status species if occurring in combination with factors such as being underlain by ultramafic or volcanic soils. Neice-Sobrante-Hambright complex soils are derived from basalt and are present within a narrow strip of the project area, on Hillcrest Drive. However, that portion of the road is heavily disturbed due to existing property, buildings and ornamental landscaping, and doesn't provide conditions that would support intact native vegetation communities otherwise associated with the soil type and locality. Further, any proposed construction activities associated would be restricted to areas that have already been heavily altered, disturbed and/or developed, which would exclude any special status species that could otherwise have potential to occur within the suite of environmental and edaphic conditions.

Special Status Wildlife Species

Eight special status wildlife species were determined to have potential to occur in the project area, only one of which is proposed for federal listing: Northwestern pond turtle (NWPT) (*Actinemys marmorata*) - Federal proposed threatened. Additionally, two state listed species have potential to occur: Tricolored blackbird (*Agelaius tricolor*) – State Threatened, CDFW Species of Special Concern, USFWS Bird of Conservation Concern, and Clear Lake hitch (*Lavinia exilicauda chi*) – State Threatened. Five additional non-listed special status wildlife species were also determined to have potential to occur in the project area. Of the eight species with potential to occur, only five may be significantly impacted by the proposed project without the implementation of avoidance and minimization measures: Foothill yellow-legged frog (north coast DPS), Nuttall's woodpecker, Oak titmouse, Bullock's oriole, and Tricolored blackbird.

The potential for these species to be present based on their habitat requirements and resulting potential impacts from the proposed project are discussed in greater detail below. Federal/state listed species (other than tricolored blackbird) are not likely to be significantly affected due to the avoidance of

jurisdictional aquatic features and their associated riparian habitat within the project area. The project would have no effect on any potential wildlife corridors.

Foothill yellow-legged frog north coast DPS (*Rana boylii* pop. 1)
CDFW Species of Special Concern

This species is found in woodland and forest streams and rivers and prefers flowing water with a rocky substrate (including at least some cobble-sized substrate), to which egg masses are attached. The foothill yellow-legged frog (FYLF) is rarely found far from a source of permanent water, though it can estivate in dry streambeds. Recent studies have found that FYLF are rarely found more than 12 meters from the stream channel but may move upstream or downstream as far as 7 km in response to water availability. The average distance adults were found outside the stream channel was 3 meters in all seasons with a maximum distance of 40 meters. Studies also found that metamorphosed FYLF's diet is comprised of terrestrial insects primarily including spiders, beetles, and flies. Historically, this species was known to occur in most Pacific drainages from Oregon to Los Angeles. Populations have declined due to siltation and the introduction of bullfrogs and exotic fish.

FYLF may potentially be found in the vicinity of Middle Creek and Clover Creek adjacent to the Bridge Arbor section of the project area. The open gravel bars in Middle Creek are ideal for basking and provide low velocity areas to lay eggs. The high sunlight also promotes algae growth, which is the main food source of FYLF tadpoles. As such, this area potentially provides suitable basking, foraging, and breeding habitat for FYLF. The portion of Clover Creek south of the intersection with Bridge Arbor has little to no canopy but has smaller and more sedimented substrate than Middle Creek. As such, this stream may potentially provide suitable basking, foraging, and dispersal habitat, but likely does not provide suitable breeding habitat. Adult FYLF are not likely to leave the stream's edge to travel into the uplands within the project footprint, though they have the potential to do so. Recently metamorphosed juveniles are slightly more likely to disperse into uplands areas. Because the project footprint is within the 40-meter dispersal distance from Clover Creek and Middle Creek, and because Middle Creek potentially provides suitable breeding habitat, there is a small potential for FYLF to be present within the Project footprint. If an individual FYLF was present within the project area, then the proposed project activities, including trenching along Bridge Arbor, would have the potential to significantly impact this species. Implementation of Mitigation Measure BIO1 would reduce potential impacts to a level of less than significant.

Nuttall's woodpecker (*Dryobates nuttallii*)
USFWS Bird of Conservation Concern

Nuttall's Woodpecker, common in much of its range, is a year-round resident throughout most of California west of the Sierra Nevada. Typical habitat consists of oak or mixed woodland, and riparian areas. Nesting occurs in tree cavities, principally those of oaks and larger riparian trees. Nuttall's woodpecker also occurs in older residential settings and orchards where trees provide suitable foraging and nesting habitat. This species forages on a variety of arboreal invertebrates.

Oak titmouse (*Baeolophus inornatus*)
USFWS Bird of Conservation Concern

This relatively common species is year-round resident throughout much of California including most of the coastal slope, the Central Valley and the western Sierra Nevada foothills. In addition, the species may also occur in residential settings where landscaping provides foraging and nesting habitat. Its primary habitat is woodland dominated by oaks. Local populations have adapted to woodlands of pines

and/or junipers in some areas. The oak titmouse nests in tree cavities, usually natural cavities or those excavated by woodpeckers, though they may partially excavate their own. Seeds and arboreal invertebrates make up the birds' diet.

Bullock's oriole (*Icterus bullockii*)
USFWS Bird of Conservation Concern

This species is relatively common in much of its range. It is a summer resident throughout most of California west of the Sierra Nevada. Typical habitat consists of oak or mixed woodland and riparian woodland. Nesting occurs in trees, principally those of oaks and larger riparian trees.

Suitable breeding habitat for Nuttall's woodpecker, oak titmouse, Bullock's oriole, and/or other common bird and raptor species protected by the MBTA is present in nearly all sections of the project area, with the exception of the stretch along Highway 20. Project activities, including trenching, have the potential to cause reduced nesting success or nest abandonment, both of which are considered significant impacts.

Mitigation Measure BIO2 includes preconstruction nesting surveys that would reduce potential impacts to nesting birds, including Nuttall's woodpecker, oak titmouse, and Bullock's oriole, to less than significant.

Tricolored blackbird (*Agelaius tricolor*)
State Threatened, CDFW Species of Special Concern, USFWS Bird of Conservation Concern

The tricolored blackbird is a locally common resident in the Central Valley and along coastal California. Most tricolored blackbirds reside in the Central Valley March through August, then move into the Sacramento-San Joaquin Delta and east to Merced County and coastal locations during winter. This species breeds adjacent to fresh water, preferring emergent wetlands with tall, dense cattails or tules, thickets of willow or blackberry, and/or tall herbs. Flooded agricultural fields with dense vegetation are also used. This species is highly colonial; nesting habitat must be large enough to support a minimum of 30 pairs, and colonies are commonly substantially larger (up to thousands of pairs). The tricolored blackbird often intermingles with other blackbird species during the non-breeding season. Individuals typically forage up to 5.6 miles from their colonies in ruderal and open grassland habitats, although in most cases only a small part of the area within this range provides suitable foraging. Tricolored blackbirds forage on the ground in open habitats for seeds and invertebrates. Common foraging habitats include grazed grasslands, shallow wetlands, seed croplands (such as rice, alfalfa, barley, or wheat), and sources of invertebrates such as dairy farms.

A man-made pond near the southwest corner of Meadow Pointe Residential Park has tall, dense tules around its perimeter and is large enough to support a nesting colony of tricolored blackbirds. Additionally, the stretch of Clover Creek below the intersection with Bridge Arbor has blackberry brambles and willows and is also large enough to support a nesting colony. Much of the land in the immediate vicinity of the project area is occupied by orchards or vineyards, which are marginal or unsuitable foraging habitat for this species. However, suitable foraging habitat, in the form of rice fields, is located approximately 1.3 miles southeast of the project area, which is within the foraging range of this species; additionally ruderal habitats within the project area may also provide marginal quality foraging habitat. The proposed project will not have a negative effect on any potential foraging habitat in the vicinity of the project area given all effects are temporary. If a nesting colony is present in the vicinity of the project area, then project activities, including trenching, have the potential to cause

reduced nesting success or nest abandonment, both of which would constitute a negative effect on a listed species.

The proposed project may affect but is not likely to adversely affect state listed tricolored blackbird (*Agelaius tricolor*) with implementation of Mitigation Measure BIO3. Avoidance and minimization measures will also ensure no indirect effects occur to sensitive riparian habitats associated with Clover Creek and/or Middle Creek occur and/or to any nesting species protected under MBTA and/or CFGC. Mitigation Measure BIO3 includes nesting season appropriate surveys for tri-colored blackbird and avoidance buffers, if present, to reduce any potential impact to less than significant.

b. Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service?

No sensitive communities are present in the project area. However, at least one community, arroyo willow thickets (riparian) is protected under Section 1600 of the Fish and Game Code and the Porter Cologne Act. The project would avoid direct impacts to this sensitive community through design. Potential indirect effects such as spills may occur where work is occurring in close proximity to this habitat. Mitigation Measure BIO4 would reduce potential impacts to sensitive habitats to less than significant.

c. Would the project have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

Middle Creek and Clover Creek are the only jurisdictional waters found within the project area. Both of these waterways will be avoided by the project given that work will be within existing roadways and outside the limits of any riparian vegetation associated with these two features. Crossing Middle Creek will be done through hanging the water main on the bridge and not impact regulatory waters or riparian habitat. When that crossing is designed, the District would consult with both CDFW and the Regional Board to determine if permits are required, as described in Mitigation Measure BIO4. Similarly, the man-made pond near the southwest corner of Meadow Pointe Residential Park will also be fully avoided.

d. Would the project interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The project would be primarily located underground in existing roadways or disturbed locations and would not disrupt movement of migratory fish or wildlife species or impede the use of wildlife nursery sites.

e. Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The County does not have a tree protection ordinance. No tree removal is anticipated to occur associated with the project since it occurs primarily within existing roadways or developed sites.

f. Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The project location is not part of an adopted Habitat Conservation Plan or Natural Community Conservation Plan.

Cumulative Impacts

There are no adverse cumulative environmental impacts to biological resources resulting from implementation of the proposed project.

Mitigation Measures

BIO1

To avoid impacts to foothill yellow-legged frog, the following measures shall be implemented:

- A pre-construction survey for special status amphibians shall be conducted prior to the initiation of Project activities within 48 hours of the start of ground disturbance activities. Surveys are to be conducted by an approved qualified biologist with experience surveying for each species. If any species is found on the project area, it should be allowed to leave the area on its own. If the animal does not leave the area on its own, CDFW should be contacted.
- For work occurring outside paved areas, a qualified biologist should first survey the area each day that work is occurring to ensure FYLF are not present. Alternatively, wildlife exclusion fencing may be installed between sensitive habitats and the project area to prevent animals from entering the work area (where appropriate under the supervision of a qualified biologist to ensure impacts to sensitive habitat and/or species do not occur during fence installation).
- Trenches and holes should be covered and inspected daily by the qualified biologist, or individual appropriately trained by the qualified biologist, for stranded animals. Trenches and holes deeper than one foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.
- Plastic monofilament netting (erosion control matting) is prohibited at this location due to the potential to entangle or trap FYLF (or NWPT). Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

BIO2

To avoid potentially significant impacts to nesting birds, including Nuttall's woodpecker, oak titmouse, Bullock's oriole, and other common nesting birds and raptors, noise-generating activities exceeding ambient conditions should be initiated outside the nesting bird season either before March 1 or after August 31. If work must be initiated during the nesting season, the following avoidance and minimization measures are recommended:

- A pre-construction nesting bird (both passerine and raptor) survey of suitable nesting habitat within the project area and/or adjacent habitats should be performed within 10 days of groundbreaking. If no nesting birds are observed, no further action is required. A follow up survey is required if a stoppage in work occurs for longer than 10 days between March 1 and July 1; initiation of new nests is not anticipated after July 1.
- If active bird nests (passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged

or the nest has naturally failed or been predated, as determined by a qualified biologist. The radius of the required buffer zone can vary depending on the species and status of the nest. The dimension of any required buffer zone should be determined by a qualified biologist.

BIO3

A pre-construction nesting bird survey should be performed to detect any potential tricolored blackbird colonies in the vicinity of the project area. This survey should be performed during the tricolored blackbird season in April, during the active colony formation and/or nest building phases when colonies are most easily identifiable. If a tricolored blackbird colony is detected, a minimum 60-foot (up to 300-foot as needed to incorporate nearby foraging habitat) disturbance-free buffer zone shall be established around the colony, until all young have fledged and the colony is dispersed.

BIO4

To avoid and minimize potentially significant impacts to potentially jurisdictional aquatic features and their associated riparian habitat (arroyo willow thickets) resulting from incidental discharge during project construction, work should be conducted during the dry season and construction best management practices (BMPs) should be implemented. This includes implementing an erosion control plan, designating egress/ingress and staging within existing disturbed/developed areas outside of the riparian zone, setting up exclusion zones, and ensuring thorough cleanup following construction closeout. Implementation of these measures would ensure that potential effects to Middle Creek and Clover Creek and their associated riparian habitat are less than significant.

When the pipeline crossing for Clover Creek is designed and prior to construction, the District shall consult with CDFW and Regional Board regarding any potential impacts to regulatory waters or riparian habitat. If required, permits shall be obtained and permit conditions implemented prior to or during construction.

V CULTURAL RESOURCES

Section 15064.5(a) of CEQA includes a broad definition of historical and archaeological resources as follows:

(1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4850 et seq.).
(2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
(3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be "historically significant" if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code § 5024.1, Title 14 CCR, Section 4852) including the following:
    (A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
    (B) Is associated with the lives of persons important in our past;
    (C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or,
    (D) Has yielded, or may be likely to yield, information important in prehistory or history.
(4) The fact that a resource is not listed in, or determined to be eligible for listing in the California Register of Historical Resources, not included in a local register of historical resources (pursuant to section 5020.1(k) of the Public Resources Code), or identified in an historical resources survey (meeting the criteria in section 5024.1(g) of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code sections 5020.1(j) or 5024.1.

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?	□	■	□	□
b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	□	■	□	□
c. Would the project disturb any human remains, including those interred outside of dedicated cemeteries?	□	■	□	□

Eileen Barrow & Associates, in collaboration with the Habematolel Pomo of Upper Lake, completed a Cultural Resources Report for the project[8]. This study was conducted to meet the requirements of CEQA, the State Water Resources Control Board, and Section 106 of the National Historic Preservation Act. As stated in 36 CFR Part 800.1, Section 106 of the National Historic Preservation Act requires Federal agencies to take into account the effects of their undertakings on historic properties; therefore, the purpose of this study is to identify potential historic properties upon which this project may cause an adverse effect. Per California Code, Public Resources Code [PRC] § 21084.1, this study seeks to identify potential historical resources upon which this project may cause a substantial adverse change.

In addition, this study seeks to identify potential Tribal Cultural Resources (TCR) as defined in PRC § 21074 to the extent possible. However, a site, feature, place, cultural landscape, sacred place, or object can only be identified as a TCR by a California Native American tribe, and it is the legal requirement of the lead agency to conduct consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project as required under PRC §21080.3.1.

This section contains large excerpts from the Barrow & Associates report. Locations of archaeological sites and TCRs are confidential. Specific location information has been omitted.

Environmental Setting

There are several creeks and small drainages that either cross the area of potential effect (APE) or flow close to it. The biggest of these are Clover and Middle Creeks.

The geology of the APE consists of alluvial deposits, alluvial fan deposits, and basaltic volcanic rocks. The alluvial deposits are weakly sorted to moderately well-sorted sand, silt, gravel, and boulders deposited in modern stream and river channels and on adjacent low-lying flood plains. Alluvial fan deposits contain similar materials to alluvial deposits, but are found where streams disgorge onto flat plains at the mouths of canyons. Older alluvial fan deposits can be dissected and incised by younger fans and alluvial terrace deposits. All of the above-described deposits were formed during the Holocene and Pleistocene Epochs (present to 2.58 million years ago). The other geological deposit in the APE consists of basaltic volcanic rocks of the Central Belt of the Franciscan Formation. This formation was formed during the Jurassic Period.

What is pertinent for the study is the APE's location on alluvial formations. Depending on environmental factors that will be discussed in the Buried Site Potential Model section, archaeological sites can be buried in these formations.

Soils within the APE are comprised of Lupoyoma and Wappo series, as well as Neice-Sobrante-Hambright complex. Lupoyoma soil is a moderately well-drained silt loam found on flood plains. In a natural state, Lupoyoma soils support the growth of annual grasses and scattered oaks. Historically, these soils were used for orchards, vineyards, hay and pasture, and homesite development. Wappo soil is a moderately well-drained soil found on terraces. In a natural state, Wappo soils support the growth of annual grasses and scattered brush and oaks. Historically, these soils were used for livestock grazing, hay and pasture, and homesite development. Neice-Sobrante-Hambright complex consists of well-draining loam and gravelly loam found on hills. In a natural state, this complex supports the growth of oaks, brush, and annual grasses. Historically, this

[8] *Cultural Resources Study for the Meadow Pointe/Upper Lake County Water District Consolidation Project, Upper Lake, Lake County, California*. Eileen Barrow & Associates. October 2025.

complex was used for livestock grazing, firewood production, wildlife habitat, watershed, and homesite development.

Cultural Setting

Prehistory

It is generally accepted that humans traveled to North America from Siberia and thus began the peopling of the American continents. Evidence has shown that these migrants took two routes into North America; one into what is now central Canada and the central part of the United States, and the second route along the Pacific coastline. The first theory of migration through Canada and the central part of the United States is the older of the two theories; evidence for this migration was from what are termed Clovis sites, which are archaeological sites that contain a style of projectile points called Clovis points. These sites tend to date between 10,500 to 11,000 BC which falls after ice sheets melted sufficiently to allow passage from Siberia, through Alaska and Canada into the United States. However, when the antiquity of Monte Verde (~12,600 BC) was rigorously verified, the floodgates of study into sites that could date to the Terminal Pleistocene and Early Holocene began, as evidence showed that migration through the Alaskan and Canadian corridor would not have been possible due to the presence of ice sheets. While Alaska has received a great amount of study on this subject, California is home to an increasing number of identified Paleo-Indian sites (11,500-9,000 BC) that have been investigated to learn more about this period. The very oldest sites in California tend to be found near the coastline, or along old lakes and marshes. Due to several meters of sea level rise since the beginning of the Holocene Epoch, there are likely thousands of submerged archaeological sites that date to the Transitional Pleistocene/Early Holocene.

The APE is located in a part of northwestern California which is at the southern end of what has been described as the Russian River Subregion, (typically referred to as the north San Francisco Bay Area) but not quite far enough to be in the Eel River Subregion which extends from north of Ukiah further northward into Humboldt and Trinity counties.

Jesse Peter was the first to conduct field surveys in this region (though largely in the Santa Rosa Plain and Sonoma Valley areas) and documented archaeological sites. In the 1920s, he directed an excavation of a site in the Santa Rosa area.

In the 1930s, Chester Post excavated into the Borax Lake Site, though his work can barely be called more than pot-hunting. After finding several fluted points, Post brought his findings to the attention of Mark Harrington of the Southwest Museum who conducted a series of excavations in the 1940s followed by Ritner Sayles. Harrington hypothesized that the site was 10,000 to 15,000 years old. A site of this antiquity always comes under great scrutiny and because of previous disturbance and pot-hunting these dates were questioned. In the 1960s and 1970s, the site was again excavated, and evidence was found to support an age of 11,000 to 12,000 years.

Following work conducted in the Sacramento Valley, Clement Meighan investigated a site in northern Mendocino County where he identified the Mendocino Aspect of the Late Borax Lake Pattern. Meighan sought to develop the first chronology of the region.

As the field of archaeology became more refined, archaeologists began to focus on developing chronologies like Meighan's. However, a common problem was that archaeologists were, "largely concerned with internal relationships, between local cultural sequences…" that were "considered against the backdrop of California as a separate or even detached area" (Baumhoff and Elsasser 1956:1). In essence, archaeologists were not

looking at the "big picture" and were developing only micro-chronologies. This was due to the lack of dating methods such as radiocarbon dating.

David Fredrickson felt this was a problem, and for his dissertation, he adapted Gordon Willey and Philip Phillips' (1958) methodological application of the culture-historical theory to California archaeology to develop a chronology. Through his work at sites in Lake and Napa Counties, Fredrickson identified five cultural/time periods: Paleo-Indian, Early Archaic, Middle Archaic, Late Archaic, Early Emergent, and Late Emergent. Years later, Fredrickson modified his chronology which is presented below in Table V-1.

In 1960, the first study of obsidian hydration as a dating tool for archaeologists was published. Obsidian absorbs water at a specific rate and the amount of water that it absorbs is measured in microns. Friedman and Smith's study showed that the chemical composition of obsidian specimens as well as ambient temperature affect the hydration process. It took 20 years for archaeologists in places where obsidian is found in archaeological sites to develop a method for dating obsidian specimens. In the Northern San Francisco Bay Area, there are four major obsidian sources and in 1987, Thomas Origer devised a hydration chronology for two of them. This chronology was developed by pairing micron readings taken from obsidian specimens and pairing them with radiocarbon-dated artifacts and features. Origer was able to develop a hydration rate for Annadel and Napa Valley obsidian sources as a result of his study. Later, Kim Tremaine developed comparison constants between the four primary obsidian sources found in Northern San Francisco Bay Area archaeological sites (1989, 1993). The concept of comparison constants allows for the calculation of dates from hydration band measurements taken from obsidian specimens from sources with unknown hydration rates.

Though a great amount of work has been conducted to refine these early obsidian hydration analysis efforts, those refinements, as well as the development of obsidian sourcing efforts through X-ray *fluorescence,* have made it possible to improve the dating of archaeological sites throughout California.

Table V-1. Fredrickson's Chronology of Cultural Characteristics by Period.

BP	Temporal Period	Description
500-200	Upper Emergent	The clam disk bead money economy appears during this period. Trade goods are found farther from their point of origin, suggesting trade relations increase and become more regularized than in the past. This time has a general increase in craft specialization, displays of wealth, and increased cultural complexity.
1000-500	Lower Emergent	Territorial boundaries begin to become set and trade and exchange between groups continue to occur. Several technological changes occur during this time. The bow and arrow are introduced and adaptations to a marine environment are observed. There is increased evidence of wealth and status found in burials that date to this time.
2500-1000	Upper Archaic	Social complexity becomes more apparent during this period. Shell beads appear as an indicator of wealth and exchange. This is a time of the possible emergence of the Kuksu religious system. Trade and exchange become more complex and regularized between groups.
5000-2500	Middle Archaic	Evidence of increased sedentism and population is observed which correlates with a stabilization of the environment. Mortars and pestles appear showing that the acorn is used as a food source. Acorn use was introduced as suggested by mortars and pestles. Hunting appears to be equally important based on the number of projectile points found that date to this time. Trade relations begin to become more obvious during this time as well.
8000-5000	Lower Archaic	Lakes are drying, causing habitation sites to be moved to places with more stable resources. Milling technology appears and is abundant suggesting the possibility that gathering plant foods became more important. Social units appear to remain family and extended family.

12,000+-8000	Paleo-Indian	This is a time when humans are first arriving in California. Sites tend to be around old lakes, though people were potentially semi-nomadic based on available resources. Groups consisted of family and extended family units. Milling technology is lacking, which suggests that resource gathering did not involve plants that required processing.

Because much of the archaeological work in California is driven by regulations related to development, very few studies have been conducted in Northwestern California, especially in the vicinity of Clear Lake. The most recent synthesis of archeological data into a chronology from this area was conducted by Hildebrandt. Hildebrandt looked at data from several excavations throughout northern California and found that the chronological patterns seem to have a north/south divide in the type of patterns and the length of time they span. To the south (roughly from northern Sonoma County to Lake County and mid-northern Mendocino County), patterns are ordered Post, Borax Lake, Berkeley, and Augustine from oldest to youngest. However, in the north (from mid-northern Mendocino County to approximately the Oregon border), that pattern is Post, Borax Lake, Mendocino, and Gunther from oldest to youngest. Hildebrandt has a summary of the artifact types and timeframes for each pattern found in northern California shown in Table V-2.

Because of the rural and undeveloped nature of this part of California, few excavations have been conducted that contribute to a refinement of Hildebrandt's chronology.

Table V-2. Northwestern California Chronology

Hildebrandt's Pattern – North	Approximate Time Range	Hildebrandt's Pattern – South	Approximate Time Range
Gunther	AD 1800 to AD 500	Augustine	AD 1800 to AD 500
Mendocino	AD 500 to 2500 BC	Berkeley	AD 500 to BC 6500
Borax Lake	2500 BC to 8000 BC		
		Borax Lake	6500 BC to 8000 BC
Post	8000 BC and older	Post	8000 BC and older

ETHNOGRAPHY

In 1984, Michael Moratto created a comprehensive model of the linguistic prehistory of California and showed that there are several avenues for analysis of population movements. Victor Golla updated Moratto's model in 2007, and advances in DNA analysis have also contributed fascinating information about California's population prior to European contact.

Five language groups were found in California at the point of European contact: the Hokan and Penutian phyla, and the Uto-Aztecan, Algic, and Athabaskan language families. In the early part of the Holocene Epoch, groups who spoke languages descended from the Hokan phylum were found throughout the majority of California.

By circa 8,000 BC, pre-Yukian speakers moved into and inhabited northwestern California down to the mouth of San Francisco Bay. For the next 6,000 years, pre-Yukian and Yukian speakers occupied this area with some pressure on the eastern boundary from Hokan speakers. Beginning around 2,000 BC, Utian populations inhabiting the Sacramento-San Joaquin Delta area expanded out of the Central Valley in all directions, including to the northwest into the North San Francisco Bay Area. This pushed Yukian speakers northward out of what is now southern Marin and Sonoma Counties and all of Napa County.

By AD 1, Hokan speakers moved out of the northern part of the Central Valley and the Clear Lake Basin southwest and west into present-day southern Mendocino and Sonoma counties. This pushed Yukian speakers further north but left a pocket of Yukian speakers, the Wappo, in northern Napa County and eastern Sonoma County. This linguistic configuration is largely how Europeans found the North San Francisco Bay Area at the point of contact.

The Hokan speakers occupying the vicinity of the APE at the time of European contact were the Eastern Pomo. The Eastern Pomo language is one of seven mutually unintelligible Pomoan languages belonging to the Hokan language stock. The Eastern Pomo's territory falls around Clear Lake and Upper Lake in modern-day Lake County.

Information about Pomoan culture comes largely from secondary sources and only very few first-hand accounts. This means the following accounts of Pomoan culture could be inaccurate, but are based on available ethnographic documents.

Though their languages are different, their cultures are very similar. Gifford observed that many Pomoan groups were divided into smaller communities, which typically occupied a geographic area that was recognized as such by neighboring communities. These communities (in the past referred to as tribelets) had a central village, the size of which likely varied, but estimates range from 125 to 1,500 people. Community territories tended to be defined by watersheds versus extending from ridge to ridge or from creek to creek. The size of a territory was largely dependent on the availability of resources to support a population. There were five main Eastern Pomo-speaking village-communities around the upper end of Clear Lake. Dwellings in permanent villages consisted of circular or elliptical buildings constructed of native lake reeds referred to as tules.

Though community territories had a central village, people needed to migrate through and sometimes out of their territories to obtain seasonally available resources. One of the most important food sources to the Pomo was the acorn, as this was a long-lasting staple. Seeds and berries were also gathered. Protein sources consisted of forest-dwelling animals, birds, fish, and grasshoppers. Tools used for processing seeds and acorns consisted of grinding slabs, mortars, handstones, pestles, and hopper mortars and baskets. Tools used for hunting and processing animals were bifacial blades made of chert, obsidian, and sometimes basalt, hafted

to spear, atlatl, or arrow shafts, knives, and choppers. Tools used for fishing or capturing animals were woven traps, nets, weirs, and hooks made of bone.

Evidence of Pomoan use of the landscape can be found in a variety of ways. Villages occupied year-round, or for several years seasonally, are marked by darkened soil containing bone fragments, sometimes shellfish fragments, debitage, and tools or tool fragments. Because these places were inhabited for a long time, a variety of life occurrences and ceremonies took place, including death; therefore, village locations often contain burials. Seasonal camps or task-specific sites can vary but are often marked by tools, tool fragments, and debitage, which are chips of stone cast away during the process of making bifacial tools. Some sites may have bedrock mortars if the conditions are right.

NATIVE AMERICAN HISTORY

Unlike some Pomoan groups, the Eastern Pomo are just north of the holdings of the Spanish missions in California. Even so, the introduction of diseases had a devastating effect on the native population and disrupted traditional ceremonial and ritual practices, and the Eastern Pomo did not escape incidents of conflict with Europeans and Americans. There are accounts of Eastern Pomo individuals being forced into labor by ranchers who ran cattle into their area, especially once Americans began settling there. Settlers Kelsey and Stone exploited Eastern Pomo for their cattle operations until the Eastern Pomo responded to their abuses with death; the United States Cavalry was sent to punish the natives who killed Kelsey and Stone with the result being the massacre of an innocent group of people fishing at what is now known as Bloody Island at the northwestern end of Clear Lake. Not long after, the Lake County Pomo were forced to relocate to Round Valley to the Nome Cult Indian Farm.

As homesteaders settled into the area, Eastern Pomo people were displaced from their former village-communities. Some members of a few village communities purchased 90 acres of land north of Upper Lake with their combined assets and built a successful traditional community known as Habematolel. However, this community flourished for only a few decades until a fire burned several houses and buildings, curiously around the time that adjacent land was purchased by the government for a reservation. The early 20th century saw the establishment of several Rancherias in Eastern Pomo territory.

The 20th century saw the active involvement of Eastern Pomo people in political processes to fight for their rights. These activities include a court case giving non-reservation Indians the right to vote, the elimination of segregated schools and public facilities, and participation in the occupation of Alcatraz Island in 1969-1971. While many other tribal groups had few speakers of their language by that time, in the 1970s, as much as a third of Eastern Pomo still held knowledge of their language. Eastern Pomo tribes have also fought for recognition from the federal government. Presently, there are seven Pomo tribes in the Lake County area.

The Habematolel Pomo of Upper Lake is the tribe associated with the vicinity of the APE. Following a lengthy court process, the tribe's federally recognized status was restored, and despite some delays, the tribe was able to successfully reorganize in 1998 and formally approve its Constitution in 2004.

Since the tribe received its federal recognition, it has worked to become self-sufficient by fighting for and succeeding in constructing a casino and employing other economic opportunities. No longer restricted to federal funding, the Habematolel Pomo of Upper Lake is now empowered to fund programs that support its people and culture.

The tribe presently works to preserve Pomo culture, meaningfully manage lands and natural resources, and provide education opportunities for its children. The Habematolel Pomo of Upper Lake continues to honor its Pomoan culture in various ways. It holds an event called Big Time, where traditional dances, songs, and

food are highlighted. The tribe has a language program aimed at reintroducing the Eastern Pomo language into their community. There are also members who hold cultural classes, such as jewelry and basket-making classes. By setting itself up to become self-sufficient, the Habematolel Pomo of Upper Lake has aided the immense process of rebuilding its culture, which has already begun to flourish in the 11 years since approval of its federal recognition.

HISTORY

Around the time California achieved statehood, the land that comprises Lake County was largely within the boundaries of neighboring Mendocino and Napa counties. Named for the lake within its limits, Lake County was established in 1861. American people arrived in Lake County in the 1850s to settle the valley lands and lakeshores first as the Mexican-era ranchos were divided. The hills and mountains were settled as valley land became unavailable, but due to the remoteness and ruggedness of the county, it has remained rural. Lake County inhabitants were primarily focused on agricultural pursuits, eventually becoming known for pear and bean cultivation. However, the presence of mineral springs meant the establishment of resorts and a tourism industry as early as the 1870s. Lake County also boasted the presence of minerals, and a mining industry developed, which focused on sulfur, mercury, and borax. The demand for mercury in particular was fueled by the discovery of gold in California.

Historically, the APE was within Rancho Lupyomi, a land grant "about which there was much litigation" (Hoover *at al.* 2002:144). When originally granted to Salvador Vallejo and Juan Antonio Vallejo in 1844, it consisted of as much as 16 leagues and encompassed Upper Lake, Bachelor Valley, Scotts Valley, and Big Valley. Settlers soon made their way into the area and took up residence. The numerous claims to the rancho were all rejected as fraudulent by the American courts.

The first business established in the area was William Elliot's blacksmith shop at the upper end of the valley, which was in operation by the mid-1850s. Settlement in this area occurred gradually, such that by 1881 the population reached about 150 people and there were "three stores, three hotels, three livery stables, one meat market, two blacksmith shops, three churches, one planning and grist mill, and one saloon" (Slocum, Bowen & Co. 1881:202). At that time, the creeks and drainages would often flood the streets of the town. It was prognosticated that Upper Lake was unlikely to grow very large, and this prediction has held true as this community has a population of just over 1,000 people. While Upper Lake has not been a destination in and of itself, it was on the transit routes used by tourists and others to reach their desired location.

The resort and tourism industry in Lake County initially centered on the mineral springs in the county, with a focus on health and wellness. Concentrations of resorts were found east of Clear Lake, west of Upper Lake, and in the volcanic uplands, including Cobb, Boggs, and Harbin Mountain. The only successful resort outside of these vicinities was Highland Springs in the hills bordering the southwest portion of Big Valley. The journey to these springs often involved multiple legs of travel, with the final leg consisting of a stage line running from a neighboring community, such as Ukiah or Calistoga, to one's final destination. These resorts were popular attractions for several decades. However, improvements to state and county roads left some resorts isolated, and a shift in public attitudes towards the health benefits of the springs meant a decrease in demand, and not all resorts were able to continue operations. Some resorts were able to pivot and feature recreational facilities to keep up with the changing times into the mid-20th century; but the rise of car and air travel in the 1950s spelled the end of large resorts and by the 1960s the larger resorts were subdivided, with smaller resorts managing to meet the needs of tourists.

Mining pursuits in Lake County largely waned early for a variety of reasons. The mining of sulfur ceased by about 1871 as the price of sulfur dropped while production costs rose. The costs of Lake County borax had always been high, and borax mining there collapsed as shipments of cheaper and more abundant quantities of

borax from southern California and Nevada arrived in San Francisco markets. Following the Gold Rush, mercury mining steadily slowed through about 1912. It was somewhat resuscitated during the First and Second World Wars, and again under a government stockpiling program in the early 1950s. By the time mercury mining ceased in Lake County, serious environmental damage had been done. The Environmental Protection Agency discovered that the water in Clear Lake was contaminated due to open pit mining practices, including the bulldozing of tailings into the lake, and remediation efforts have yet to make a meaningful impact in reversing this state.

The Upper Lake area, and Lake County in general, still has an economy based somewhat on agriculture. While viticulture has long been practiced, an increase in the acreage dedicated to wine grape cultivation was noted in the early 1970s. Wine grapes are presently the number one crop. In 2022, the total gross production of the county was just over 140 million dollars, of which wine grapes contributed over 114 million dollars. Pears are still a significant product and are the number two crop, followed by walnuts. It is interesting to note that although agriculture is a critical component of Lake County's economic picture, most people are employed in retail and service industries.

NATIVE AMERICAN CONTACT

The District had begun initiating the consultation process as required under PRC §21080.3.1 prior to the commencement of the cultural resources study. Eileen Barrow & Associates was asked not to send notification letters, as the concern was that this would cause confusion and duplicate efforts.

A search of the Sacred Lands File from the State of California's Native American Heritage Commission (NAHC) was conducted seeking information about the APE and to obtain the names of Native American individuals and groups that would be appropriate to contact regarding this project. Letters were sent to the following groups:

- Big Valley Band of Pomo Indians of the Big Valley Rancheria
- Cahto Tribe
- Cloverdale Rancheria of Pomo Indians
- Dry Creek Rancheria of Pomo Indians
- Elem Indian Colony Pomo Tribe
- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Guidiville Indian Rancheria
- Habematolel Pomo of Upper Lake
- Hopland Band of Pomo Indians
- Koi Nation of Northern California
- Manchester Band of Pomo Indians of the Manchester Rancheria
- Middletown Rancheria of Pomo Indians of California
- Noyo River Indian Community
- Pinoleville Pomo Nation
- Potter Valley Tribe
- Redwood Valley or Little River Band of Pomo Indians
- Robinson Rancheria of Pomo Indians
- Round Valley Reservation/ Covelo Indian Community
- Scotts Valley Band of Pomo
- Sherwood Valley Rancheria of Pomo
- Yokayo Tribe

Additional details of Native American consultation are included in the Tribal Cultural Resources of this document.

BURIED SITE POTENTIAL

Research was completed to assess the potential for buried archaeological deposits. A model for predicting a location's sensitivity for buried archaeological sites was formulated by Byrd *et al.* (2017) based on a variety of environmental factors. First and foremost, buried archaeological sites are not found in landforms that predate generally accepted dates for human occupation of California. The Holocene Epoch is the current period of geologic time, which began about 11,700 years ago, and while it generally coincides with the emergence of human occupation of California, geological landforms of the very late Terminal Pleistocene have potential (though low) to contain buried resources. Along with landform age, the slope of an APE and proximity to water also have a bearing on buried site sensitivity.

A location is considered to have the highest sensitivity if the landform dates to the late Holocene, has a slope of five percent or less, is within 150 meters of a source of fresh water, and is within 150 meters of a confluence. Once the environmental criteria weight for an APE is determined, then this cumulative weight is multiplied by the age multiplier developed for the geological formations. Table V-3 is an adaptation of the age multiplier developed by Byrd *et al.*.

Table V-3. Sensitivity Score, Classification, and Probability of a Buried Archaeological Site

Sensitivity Score	Classification	Probability of a Buried Archaeological Site
<1	Lowest	<1%
1-3	Low	1-2%
3-5.5	Moderate	2-3%
5.5-7.5	High	3-5%
>7.5	Highest	5-20%

ARCHIVAL STUDY PROCEDURES

A variety of documentation pertinent to the APE was examined at local libraries and online resources. These documents include, but are not limited to, 19th and 20th-century maps and aerial photographs, ethnographic literature, county property ownership records, and local histories. This research was conducted to assess the potential to encounter Native American and historic-era archaeological sites and the built environment within the APE.

In addition to the examination of pertinent local information, a study of the cultural resource base maps and records, survey reports, and other materials on file at the Northwest Information Center (NCIC) (File No. 24-1132) was completed by Eileen Barrow on January 30, 2025. Sources of information included, but were not limited to, the current listings of properties on the National Register of Historic Places, the California Historical Landmarks, the California Register of Historical Resources, and California Points of Historical Interest. In addition, OHP's *Archaeological Determinations of Eligibility* (2012), and the *Built Environment Resources Directory* (2022).

Archival research found that the majority of the APE has been previously subjected to a cultural resources study. Table V-4 lists the cultural resources studies conducted within the APE. Three cultural resources have

been documented within the APE, P-17-000446, P-17-000777, and P-17-003105. These will be described further in the Analysis section.

Table V-5 lists all of the cultural resources studies conducted within a half-mile of the APE (locations redacted as confidential). Table V-6 lists and provides a brief description of the cultural resources documented within a half-mile of the APE.

Table V-4. Cultural Resources Studies Completed within the Area of Potential Effects

Author	Date	S#[9]	Author	Date	S#
Cook	1975	143	Mundt	2023	
Flaherty	1991	12884	Parker and Fredrickson	1977	638
Haney	2004	29136	Peak & Associates, Inc.	1987	9470
Jackson and Fredrickson	1978	910	Werner	1984	6581
James	2019	53482			

Table V-5. Cultural Resources Studies Completed within a Half-Mile of the Area of Potential Effects

Author	Date	S#	Author	Date	S#
DeGeorgey	2007a	33509	McCown and Chiotti	1979	2212
DeGeorgey and McVey	2018	55604	Meacham	1977	762
Dollinger	2023	57439	Nelson	1990	49629
Dutschke	2007	43947	Neuenschwander	1991	12663
Flaherty	1983	6304	Origer	2003	27338
Flaherty	1987	8999	PAR Environmental Services, Inc.	2008	44891
Flaherty	1994	17096	Parker	1984	6624
Flaherty	1995	18182	Parker	2023	58155
Flaherty	1996	18174	Paullin	2012	39901
Haney	2009	35818	Supernowicz	1991	43917
Haney	2011	38866	Tremaine & Associates, Inc.	2008	35510
Keswick	n.d.	2346	Vallaire	2018a	54212
King	1975	1336	Windmiller	1995	48424
Leach-Palm *et al.*	2011	38865			

Table V-6. List of Cultural Resources Documented within a Half-Mile of the Area of Potential Effects.

Primary # (P-17-00)	Brief Description	Citation
0261	Dance house, probably *behe'pal*	Mauldin 1957a
0262	Midden[10]	Mauldin 1957b
0263	Midden	Riner 2018
0264	Midden	Rodriguez 2024
0265	Village site	Glisson 2012
0278	Sweathouse, house pits, some FAR	Mauldin 1960
0709	Midden	Parker 1977a
0710	Dance house and house pit	Branscome 1975a
0776	Lithic scatter	DeGeorgey 2007b
0778	Midden	Parker 1977b
0779	Lithic scatter	Parker 1977c

[9] S# refers to Site Number

[10] A midden is an archaeological site characterized by a concentrated deposit of soil darkened by fire, refuse, food remains, and ecofacts resulting from human occupation. Middens are typically the locations of villages, as they were sites of intense occupation, either by multiple people or over long periods. Middens can also contain human burials.

1594	Site Record Missing	Branscomb n.d.
1596	Midden	Brandscomb 1975b
1628	Lithic scatter	DeGeorgey and Narasimha 2022b
2233*	House	Calpo and Supernowicz 2004a
2234	House	Calpo and Supernowicz 2004b
2235	Farm	Calpo and Supernowicz 2004c
2236*	House	Calpo and Supernowicz 2004d
2560	Clear Lake Cannery	Huddeleson *et al.* 2011
2588	Commercial Building	Fine 2011
2625	Well	Nelson and Stillman 1990
3044	House	Vallaire 2018b
3045	House	Vallaire 2018c

*This resource is a building or building complex that was evaluated and found ineligible for inclusion on the California and National Registers. Though the plotting of this resource suggests it is within the APE, it is on an adjacent property

The Habematolel Pomo of Upper Lake have seen archaeological specimens associated with several recent construction projects in the area. The locations of these finds have not been formally documented and submitted to the NWIC.

There are no historic properties listed on the Archaeological Determination of Eligibility (2012) within a half-mile of the APE.

Table V-7 lists the buildings or structures listed on the Built Environment Resource Directory within a half-mile of the APE. The Middle Creek Levee is the only building or structure within the APE. This resource will be discussed below. The majority of the buildings and structures listed on the Built Environment Resource Directory have been assigned a status code of 6Y. This means that the building or structure has been evaluated for its eligibility for inclusion on the National Register and found ineligible; however, it has not been evaluated for its inclusion on the California Register. One building on the list has been assigned a status code of 7W, which means that this building has not been evaluated for its inclusion on the National or California Register, or it needs to be reevaluated. The "W" in the code suggests that an evaluation was completed and submitted to the Office of Historic Preservation, but this evaluation was withdrawn. Finally, one building on the list has been assigned five codes: 1S, 3S, 6X, 7P, and 7W. The codes 1SX and 3S suggest that this building was listed on the National and/or California Registers, but the code 6X means that the building was determined ineligible for the National and California Registers. The codes 7P and 7W relate to the building needing to be evaluated or reevaluated. Given this building does not appear to be listed on the National or California Registers, it must have either been removed or never fully listed and requires further evaluation.

Table V-7. List and Brief Description of the Buildings/Structures listed on the Built Environment Resource Directory within a Half-Mile of the Area of Potential Effects.

Name	Address	Brief Description	Status Code	Date of Construction
	422 1st St	House	6Y	1949
	330 2nd St	House	6Y	1936
	489 2nd St	House	6Y	1900
	539 2nd St	House	6Y	1932
	684 2nd St	House	6Y	1870
	9757 League St	House	6Y	1930
Upper Lake IOOF Hall/ Odd Fellows Building	9480 Main St	Hall/Community Building	7W	1898

Riffe's Hotel/ Tallman Hotel	9550 Main St	Hotel	1S, 3S, 6X, 7P, 7W	1896
	9530 Mendenhall Ln	House	6Y	1925
	9653 Middle Creek Rn	House	6Y	1900
	9880 Middle Creek Rd	House	6Y	1900
	830 Old Lucerne Rd	House	6Y	1983
	9554 Rice ST	House	6Y	1910
	885 SR 20 E	House	6Y	1935
	920 SR 20 E	House	6Y	
	935 SR 20 E	House	6Y	1933
Middle Creek Levee (Segment)	US 20	Levee	6Y	1952-1961
	9518 Washington St	House	6Y	1935

Two ethnographic villages are reported within a mile of the APE. The village of *behe'pal* (sometimes referred to as *ga'behe*) was located east of Upper Lake. This location is in the vicinity of two known archaeological sites, so it could be one of these locations. This location was reportedly occupied during historical times.

The village of *dīwī 'lem* was located southeast of the town of Upper Lake. This location corresponds with the location of P-17-000777, which is within the APE.

Review of historical maps and aerial photos shows two structures within the APE, a bridge and a levee segment. The bridge was constructed in 1931 and is located on Bridge Arbor (14C0022). Caltrans has evaluated this bridge and found it ineligible for inclusion on the National Register. The levee comprises the base of Bridge Arbor. This road was in place as early as 1938; however, it is not shown on maps as a levee until 1958. The levee was recorded and evaluated, and is discussed below under P-17-003105.

Based on landform age, analysis of the environmental setting, and incorporating the Byrd *et al.* (2017) analysis of sensitivity for buried sites, there are several parts of the APE that have a very high or high potential for buried archaeological site indicators, as those portions of the APE lie on a landform that dates to the Holocene Epoch, are relatively level, and are close to a source of fresh water. Those areas have been disclosed to the Habematolel Pomo of Upper Lake and included as part of the consultation described in the Tribal Cultural Resources section.

FIELD SURVEY PROCEDURES

A reconnaissance field survey was completed by Eileen Barrow on February 14, 2025, and on February 28, 2025. The first visit included Robert Geary, David Ritcher, and Kai Geary of the Habematolel Pomo of Upper Lake, Rachelle Henry and Chuck Martinez of the Upper Lake County Water District, Justin Witt of Brelje & Race Consulting Engineers, and Eileen Barrow of Barrow & Associates. For the second visit, Eileen Barrow met with Kai Geary and the two completed the survey of the APE. A total of five person-hours were spent in the field, and field conditions were warm and sunny.

Because the majority of the APE lies within existing roads, both sides of all roads were examined to look for archaeological site indicators, buildings, or structures. Visibility ranged from excellent to poor, with asphalt, imported gravels, vegetation, and duff being the primary hindrances.

Special attention was paid to the locations of previously documented archaeological sites.

Analysis

a. Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

The bridge that carries Bridge Arbor over Clover Creek (14C0022) is within the APE. A portion of previously recorded and evaluated levee, P-17-003105, is within the APE.

The locally owned bridge 14C0022 that carries Bridge Arbor over Clover Creek has been evaluated for the National Register and is considered ineligible for listing. Research was conducted to see if it had the potential to meet eligibility for inclusion on the California Register. No information could be found regarding the installation of the bridge. Therefore, no association can be made between the bridge and events or processes important to state, regional, or local history, and so it does not meet criterion 1. There are no important individuals associated with the bridge, and so it does not meet criterion 2. The bridge is a typical concrete and steel bridge; it does not represent the work of a master or is of distinctive construction, therefore it does not meet criterion 3. The bridge is unlikely to yield important historical information and would not meet criterion 4. As such, the bridge is considered ineligible for listing on the California Register.

P-17-003105 has been formally evaluated and found ineligible for inclusion on the California and National Registers. However, the presence of archaeological materials within the levee matrix has been discovered by members of the Habematolel Pomo of Upper Lake. While archaeological recommendations are not warranted, the tribe has an interest in the treatment of potential TCRs uncovered during construction. The District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs. This is described in the Tribal Cultural Resources section.

While Barrow & Associated determined there would be no impact to existing known historical resources and did not identify any new resources, there is always the possibility of accidental discovery of historical resources during construction. In the event resources are discovered, mitigation measure CR1 would reduce such impact to less than significant.

b. Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Results of Barrow & Associates archival research follow, including assessment of recorded sites and recommendations.

P-17-000466

Archaeological site P-17-000446 was first recorded in 1975. The location was described as a possible village that had been disturbed by highway construction and agricultural activities. Chert and obsidian tools were noted. Two "large agate blade fragments" were found, as well as obsidian, chert, and "agate" flakes. Later that year, the site was tested by Ronald King as part of a proposed highway project. The excavation work conducted at this time was located in the portion of the right-of-way that had been identified by Cook et al. as being undisturbed.

King's study found that the site consisted of two components. This was established by analyzing the types of artifacts recovered from this excavation, not through analysis of stratigraphic data. The findings were that one component dated to the Borax Lake Pattern (4500 years ago and older), and the other

component was approximately 500 years old. Several artifacts were found. No human remains were recovered, and it was determined that excavation in the intact portion of the site had sufficiently recovered materials, and this part of the site could be destroyed.

In 2004, Caltrans had another project that would impact P-17-000446. The proposed project included widening shoulders, extending cutbanks and drainage structures, relocating utilities, and upgrading public road approaches. The site was again subjected to an investigation of the project's area of direct impacts. This investigation showed that the site has been heavily impacted by past disturbance and that the portion of the site within the APE no longer retained materials that would meet eligibility requirements for inclusion on the National and California Registers. Recovered materials included obsidian and chert artifacts and flakes. Groundstone tools were found as well. Obsidian hydration analysis showed that both large and small hydration bands, supporting King's hypothesis of this site having two components.

The site was visited in 2009 as part of Far Western's survey of the Rural Conventional Highways for Caltrans but no significant statements were made other than to establish a datum for the site.

In 2019, Caltrans needed to upgrade and widen five bridges, one of which lies adjacent to P-17-000446. An extended phase I study was conducted at the site, which included the excavation of six shovel test probes. This study found that there are still archaeological materials present, and additionally, historical specimens were found, and the site was given a "/H" designation to show that it is a dual prehistoric/historical site. The findings of this study did not alter the findings of the 2004 study, other than the suggestion of an historical component to the site. However, this did not alter the determination that portions of the site were ineligible for inclusion on the National and California Registers.

In 2023, Caltrans and the California Department of Technology proposed to install broadband utility infrastructure in the Caltrans right-of-way, and this would potentially impact P-17-000046. No excavation work was conducted at the site. The site was assumed eligible for the purposes of this project, and an Environmentally Sensitive Area was established to protect the site during construction.

No archaeological specimens were found within or adjacent to the boundary of P-17-000446 in the vicinity of the APE. However, visibility was poor, and no archaeological work has been conducted in the vicinity of the APE within or near the portion of the boundary of P-17-000446 nearest to the APE. Because of this, recommendations for further study were provided in the Cultural Resources Report. However, through consultation with the Habematolel Pomo of Upper Lake, it was concluded that additional invasive site investigation was not desired. Rather, the District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs. This is described in the Tribal Cultural Resources section.

P-17-000777

Archaeological site P-17-000777 was first recorded by John Parker in 1977. At that time, the site was described as a midden containing bone, chert, and obsidian. The site was estimated to be a mound measuring one meter high and 120 by 160 meters in size. The site was located on a small hill set out in the marsh. Part of the site had been planted with an orchard.

The site was visited by Rob Jackson later the same year. Jackson's record says very little about the site, but the report states that the site area was being used to corral cows and a significant amount of manure was present, obscuring the ground surface. It was decided that the field crew would revisit the site after a tractor could be brought in to remove the manure. A few months later this was done, and the adjacent

orchard was also disced to provide better visibility so that the boundary of the site could be established. Once visibility was improved, it was determined that the boundary of the site consisted of the top of the knoll. The crew noted that the boundary of the site could extend further north and was disturbed by the construction of the various buildings; however, the boundary of the site was not extended to include this area. Like during Parker's visit, the field crew saw chert and obsidian flakes as well as mammal bone. Though the soil appeared dark, the crew could not verify that it was midden because soils were too wet. In addition, Jackson recorded a barn within the limits of P-17-000777. Originally, the barn was assigned a separate trinomial, but eventually it was combined with the archaeological site and both were assigned the same Primary number.

Because this archaeological work was conducted in anticipation of a project, the recommendation at the time was to avoid disturbing the site. If this could not be accomplished, then it was recommended that the site be investigated. A letter is appended to this survey report, written by Rob Jackson of the Anthropological Studies Center to the Lake County Planning Department. Jackson briefly describes the history of discovery of the site and subsequent visits to establish the site's boundary. Jackson goes on to say that a proposal was provided to the property owner to investigate the site because the project would impact the site, and the proposal was rejected. The property owner did not believe the site extended to the area he wanted to develop, so the Anthropological Studies Center revisited the site again and conducted a series of auger borings to demonstrate that the site did extend to the area in question. These auger borings showed that the site extended to the area proposed for disturbance and extended to a depth of three feet. When informed of the results of this auger study, the property owner notified the Anthropological Studies Center crew that he would bulldoze the site away so that it would not impede his project. Jackson states that his letter was to inform the Planning Department of the property owner's intent to destroy the site, and he hoped that this could be avoided.

In 1983 and 1984, Roger Werner was contracted by new property owners to complete an investigation of the site. Mr. Werner had participated in some of the fieldwork activities conducted in 1978 and was familiar with the site and its recent history. Werner reported that the barn had been removed at the request of the owner's insurance company because it had been damaged in a storm. He also stated that the current owners had graded and filled portions of the property within the site area.

To determine the current nature of P-17-000777, Werner conducted a field survey of the site area and subjected the area to several backhoe trenches. The field survey showed that there were no midden soils present, though Werner did note that some dark soil with a few cultural materials was found. Werner further noted that a few archaeological specimens were found on the surface, but he does not note the quantity or location. Werner observed that the hill upon which part of the site and the barn once stood was no longer present, and he estimated that over 15 feet of soil had been removed. Werner stated that this observation was supported in a letter report written by J. C. Engineering; however, the letter was not appended to the report.

Though it isn't clear how he came to this conclusion, Werner suspected that portions of the site had been covered with fill. To see if any part of P-17-000777 had been covered with fill, Werner excavated 33 backhoe trenches. The trenches ranged in length from 8 to 25 feet and from 2 to 9 feet deep. There is no table specifying the length and depth of each trench. A total of 15 obsidian flakes were found in trenches 1 through 4, which were located in the northeastern part of the site.

Werner also observed that some archaeological materials were found in fill soils in the northwest part of the project area. Werner referenced a map in his report, but the map does not show where these materials were found. The property owner stated that these fill materials were dredged from a location southeast of the project site, and Werner did provide a map of the dredge location. Because these materials were not in situ, they were not viewed as important.

Werner concluded that the site is either buried beyond nine feet, as this was the maximum depth of excavation of his backhoe trenches, or that the site was completely removed during past grading activities. He stated that it is more likely the latter, as his observations were that the backhoe trenches were excavated through any fill materials into the natural soils below and only 15 obsidian flakes were found. Given that the site was completely removed, he did not have any further recommendations.

Finally, Werner stated that the property owner and he had both spoken with Frank Treppa of the Habematolel Pomo of Upper Lake on separate occasions. The property owner was concerned about the disinterment of human remains, so he had spoken to Mr. Treppa about this potential issue. Mr. Treppa visited the site during past grading activities and did not see human burials (though it isn't clear if he was present during all grading activities).

To assess Werner's estimation that 15 feet of the hill had been removed, Barrow & Associates examined the topographic map he provided in his report with a current topographic map of the site. While it does not appear that the entire hill was 15 feet higher than the current ground surface, there are portions of the area that were once at an elevation of 1,355 feet above mean sea level (amsl), and the current elevation of the area averages 1,340 amsl.

The entire site and surrounding area was walked during the field visit, examining front yards and driveways. Both sides of roads were examined to look for archaeological materials or soils. No dark soils or archaeological materials were found. This includes the northwestern part of the area where Werner noted that fill materials containing archaeological materials were found.

No archaeological specimens were found within or adjacent to the boundary of P-17-000777. Given the investigation and findings of Roger Werner during his work in 1983 and 1984, combined with the current study, it appears that the archaeological site was removed by previous property owners, as well as several more feet of soil below the site. Because the site has been removed so thoroughly, no further recommendations were made. The Habematolel Pomo of Upper Lake expressed an interest in monitoring excavation work in the boundary and vicinity of this site, as described in the Tribal Cultural Resources section. The District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs. This is described in the Tribal Cultural Resources section.

P-17-003105

Levee segment P-17-003105 was first recorded in 2020 (Furstenberg and Webb 2020). The levee was documented and evaluated as part of the Upper Lake Flood Risk Reduction Project. Evaluation of the levee found that it did not meet the criteria for inclusion on the National or California Registers. However, during the field visit with the Habematolel Pomo of Upper Lake, Robert Geary of the Habematolel Pomo of Upper Lake informed the meeting participants that the tribe monitored ground-disturbing work related to the Upper Lake Flood Risk Reduction Project and found archaeological specimens in the matrix of the levee. Mr. Geary stated that they were involved with developing a plan for the specimens that had been found and for discovery of future specimens.

Based on the field visit, the site appears as described in the record for this structure. No archaeological specimens were found within the matrix during the field survey. The District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs. This is described in the Tribal Cultural Resources section.

Buried Site Potential

There are several parts of the APE that have a high to very high potential for buried archaeological sites based on the buried sites model. Typically, the archaeological recommendation would be to develop a Phase I study to look for buried archaeological sites. However, in consultation with the Habematolel Pomo of Upper Lake, it was determined that additional ground disturbance was not desired. The District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs. This is described in the Tribal Cultural Resources section.

Conclusion

There are known archaeological sites in the project extents and some areas outside of the known sites have a high to very high potential for buried archaeological resources. Based on this, standard accidental discovery mitigation is included as Mitigation Measure CR1. The cultural resources investigation was conducted with participation of the Habematolel Pomo of Upper Lake as part of the tribal consultation for the project. No additional invasive archaeological investigation was desired with a preference for implementing construction monitoring and Habematolel Pomo of Upper Lake's treatment protocols. This is further discussed in the Tribal Cultural Resources section.

c. Would the project disturb any human remains, including those interred outside of formal cemeteries?

There are no known human remains within the APE. However, the possibility exists that human remains could be discovered during construction. The Habematolel Pomo of Upper Lake have also indicated that ancestors could be impacted by construction. The District and Habematolel Pomo of Upper Lake would enter into an agreement to facilitate construction monitoring and treatment and reburial of TCRs, including ancestors. This is described in the Tribal Cultural Resources section. Additionally, standard accidental discovery mitigation is included as Mitigation Measure CR2 to reduce such impact to a less than significant level.

Cumulative Impacts

There are no adverse cumulative environmental impacts to cultural resources resulting from implementation of the proposed project.

Mitigation Measures

CR1

As stipulated in CCR § 15064.5 (f) of the CEQA guidelines, if potential historical resources are uncovered, during project-related activities, then all ground-disturbing work shall be halted immediately until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards can evaluate the find. Prehistoric archaeological site indicators include obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire-affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps). Additionally, the Habematolel Pomo of Upper Lake shall be contacted immediately.

CR2

As stipulated in CCR § 15064.5(d) through (e), if human remains are encountered at any point during the project, all ground-disturbing activities must cease within a minimum of 50 feet of the find while the county coroner is contacted to confirm whether the remains are California Native American remains. If the coroner determines the remains are California Native American, the coroner will contact the NAHC. The NAHC will identify the person or persons believed to be most likely descended (MLD) from the deceased California Native American. The MLD will make recommendations regarding the treatment of the remains with appropriate dignity. Additionally, the Habematolel Pomo of Upper Lake shall be contacted immediately.

VI ENERGY

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	□	□	□	■
b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	□	□	□	■

Setting

The California Energy Commission (Energy Commission) was charged with developing the states Renewable Energy Program in 1998, following deregulation of electric utilities. The Energy Commission provides a brief history of its actions regarding the Renewable Energy Program:

> In 2002, California established its Renewables Portfolio Standard program, with the goal of increasing the percentage of renewable energy in the state's electricity mix to 20 percent by 2017. The California Energy Commission's (CEC's) 2003 Integrated Energy Policy Report (IEPR) recommended accelerating that goal to 2010, and the 2004 IEPR Update urged increasing the target to 33 percent by 2020. Former Governor Arnold Schwarzenegger, the CEC, and the California Public Utilities Commission (CPUC) endorsed this enhanced goal for the state as a whole. Achieving these renewable energy goals became even more important with the enactment of Assembly Bill 32 (Núñez, Chapter 488, Statutes of 2006), the California Global Warming Solutions Act of 2006. This legislation sets aggressive GHG reduction goals for the state, and its achievements will depend, in part, on the success of renewable energy programs.
>
> Senate Bill X1-2 was signed by former Governor Edmund G. Brown Jr. in April 2011 to codify the ambitious 33 percent renewable energy by 2020 goal for all California utilities, including publicly owned utilities (POUs) that had been setting their own renewable targets.
>
> In 2015, former Governor Brown extended the renewable procurement requirement by signing Senate Bill 350, which requires 50 percent renewables by 2030. In 2018, former Governor Brown signed Senate Bill 100, increasing the 2030 renewable procurement requirement to 60 percent and implementing a 100 percent zero-carbon goal for 2045. All the while, the majority of utilities and the electricity market continue to meet and exceed these goals and expectations.
>
> In the first half of 2019, California met the Million Solar Roofs goal established in Senate Bill 1 and may have met the 50 percent PV installation goal for new homes two years early.
>
> California has ambitious goals of reducing GHG emissions 40 percent below 1990 levels by 2030 and 80 percent by 2050, and advancing the use and availability of renewable

> energy is critical to achieving those goals. Therefore, the state has pursued a suite of policies and programs aimed at advancing renewable energy and helping ensure all Californians, including low-income and disadvantaged communities, benefit from this transition.[11]"

These goals were accelerated in 2016 with passage of SB 32 requiring lowering greenhouse gas emissions to 40 percent below 1990 levels by 2030. Further, "In 2018, Senate Bill 100...set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. On the same day of signing SB 100, then-Governor Brown signed Executive Order B-55-18 with a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The executive order covers all sectors of the economy[12]."

Today, California's energy policies are intertwined with goals of reducing greenhouse gases. The Energy Commission produces the biennial Integrated Energy Policy Report. The report contains an integrated assessment of major energy trends and issues facing California's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety. The most recent report was released in 2021[13].

CURRENT ENERGY USAGE AND SOURCES

California uses the least electricity of any state with a 2020 (most recent electricity California Energy Commission date) usage of 7,069 kWh per capita[14]. The census states that Lake County had an estimated population of 68,163 in 2020[15] and the California Energy Commission indicates the Lake County used a total (residential and non-residential) of 458.674666 gigawatt hours (GWh) of electricity in 2020[16] for a per capita use of approximately 6,729 kWh, somewhat below the state average.

Lake County is provided electricity by PG&E. As of 2020, PG&E supplied 30.6 percent of its electricity from renewable resources under the California Renewables Portfolio Standard. PG&E intends to supply 50 percent renewable electricity by 2030, consistent with California's goals. Additionally, in 2020, 42.8 percent of PG&E electricity was nuclear power and 10.1 percent was hydroelectric, for a total of 83.5 percent greenhouse gas free electricity[17]. In contrast, the overall power mix in California is 34.5 percent renewable and 59 percent greenhouse gas free electricity in 2020[18].

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[11] https://www.energy.ca.gov/sites/default/files/2019-12/renewable_appendix_ADA.pdf
[12] Ibid.
[13] https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2021-integrated-energy-policy-report
[14] https://www.energy.ca.gov/almanac/electricity_data/us_per_capita_electricity.html
[15] https://www.census.gov/quickfacts/lakecountycalifornia
[16] http://www.ecdms.energy.ca.gov/elecbycounty.aspx
[17] https://www.energy.ca.gov/filebrowser/download/3882
[18] https://www.energy.ca.gov/news/2022-02/new-data-indicates-california-remains-ahead-clean-electricity-goals

Analysis

a. Would the project result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Project construction would only account for a minor use of energy, primarily associated with fuels used in construction vehicles. All construction vehicles would be California-compliant to ensure state goals of energy efficiency and air quality are maintained. The new and replacement mains would not require energy after installation—water distribution systems are generally passive after initial pumping to the water storage tanks. Elimination of the bottleneck with the proposed 12-inch main to the tanks will reduce existing pumping well pump demands. Removal of Meadow Points's wells and utilizing the District's wells will increase efficiency, conserving electricity. The overall consolidation project is necessary to resolve the existing health hazard due to MTBE contamination and update distribution system resiliency in the existing water systems and would not result in a wasteful, inefficient, or unnecessary consumption of energy resources. Improvements to the existing water systems would reduce leakage in the existing infrastructure, primarily through water main replacement. This would reduce water production requirements, leading to an overall reduction of energy used to produce and treat water, a beneficial impact.

b. Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. As indicated above, electricity to District facilities is provided by PG&E and is exceeding the state's renewable energy goals. Because the project would result in an overall modest reduction in energy associated with pumping and treatment through leak reduction and energy is supplied according to California's renewable energy policies, the project will not conflict with or obstruct the state's plan for renewable energy or energy efficiency.

Cumulative Impacts

There are no adverse cumulative environmental impacts to energy resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to energy have been identified; therefore, no mitigation is required.

VII GEOLOGY & SOILS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	□	□	■	□
ii. Strong seismic ground shaking?	□	□	■	□
iii. Seismic-related ground failure, including liquefaction?	□	□	■	□
iv. Landslides?	□	□	□	■
b. Would the project result in substantial soil erosion or the loss of topsoil?	□	□	□	■
c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	□	□	■	□
d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	□	□	■	□
e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	□	□	□	■
f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	□	■	□	□

Environmental Setting

REGIONAL GEOLOGY AND TOPOGRAPHY

The proposed project site is located within the Coast Ranges Geomorphic Province of California. This province is characterized by northwest trending topographic and geologic features, and it includes many separate ranges, coalescing mountain masses, and several major structural basins. The province is bounded on the east by the Great Valley Geomorphic Province and on the west by the Pacific Ocean. The Coast Ranges region extends north into Oregon and south to the Transverse Ranges and Ventura County.

The structure of the northern Coast Ranges region is extremely complex due to continuous tectonic deformation imposed over a long period of time. The initial tectonic episode in the northern Coast Ranges was a result of the plate convergence which is believed to have begun during late Jurassic time. This process involved eastward thrusting of oceanic crust beneath the continental crust (Klamath Mountains and Sierra Nevada) and the scraping off of materials that are now accreted to the continent (northern Coast Ranges). This is a seismically active region characterized by northwest-trending faults. Regional Geology is shown on Figure VII-1[19]. As shown on Figure VII-1, the majority of the District is located on Pleistocene-Holocene sedimentary rock.

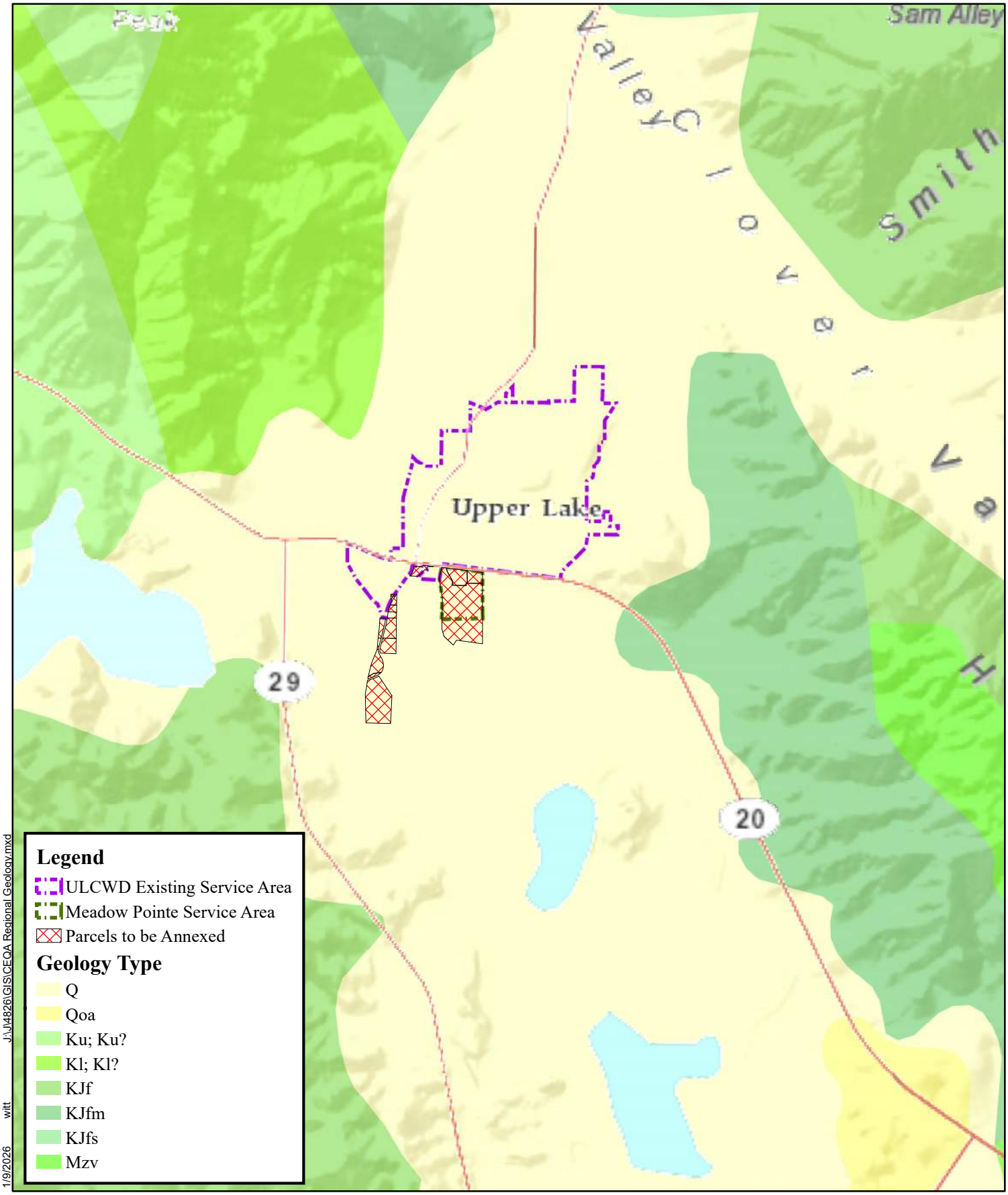
Topography is highly varied in the project area, ranging from nearly level to steep. Elevations range from approximately 1,300 feet above sea level to surrounding mountain peaks of nearly 4,500 feet.

SOILS IN THE PROJECT AREA

The United States Department of Agriculture, Natural Resources Conservation Service (USDA), maps soils across the county. USDA mapped soils in the project area are shown on Figure VII-2. Map Symbols shown on the soils maps are keyed to the soil type below[20].

Map Symbol	Soil Type
158	Hambright rock-Outcrop complex, 30 to 75 percent slopes
244	Cole variant clay loam
234	Still gravelly loam
181	Neice-Sobrante-Hambright complex, 15 to 30 percent slopes
177	Millsholm-Bressa loams, 30 to 50 percent slopes
244	Wappo variant clay loam, 2 to 8 percent slopes
199	Riverwash
176	Maywood variant sandy loam

[19] *Geologic Map of California. California Geological Survey 150th Anniversary Edition*. Charles W. Jennings, with modifications by Carlos Gutierrez, William Bryant, George Saucedo and Chris Wills. 2010.
[20] *Soil Survey.* United States Department of Agriculture, Natural Resources Conservation Service. https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Department of Conservation

NORTH

0 0.125 0.25 0.5 Miles

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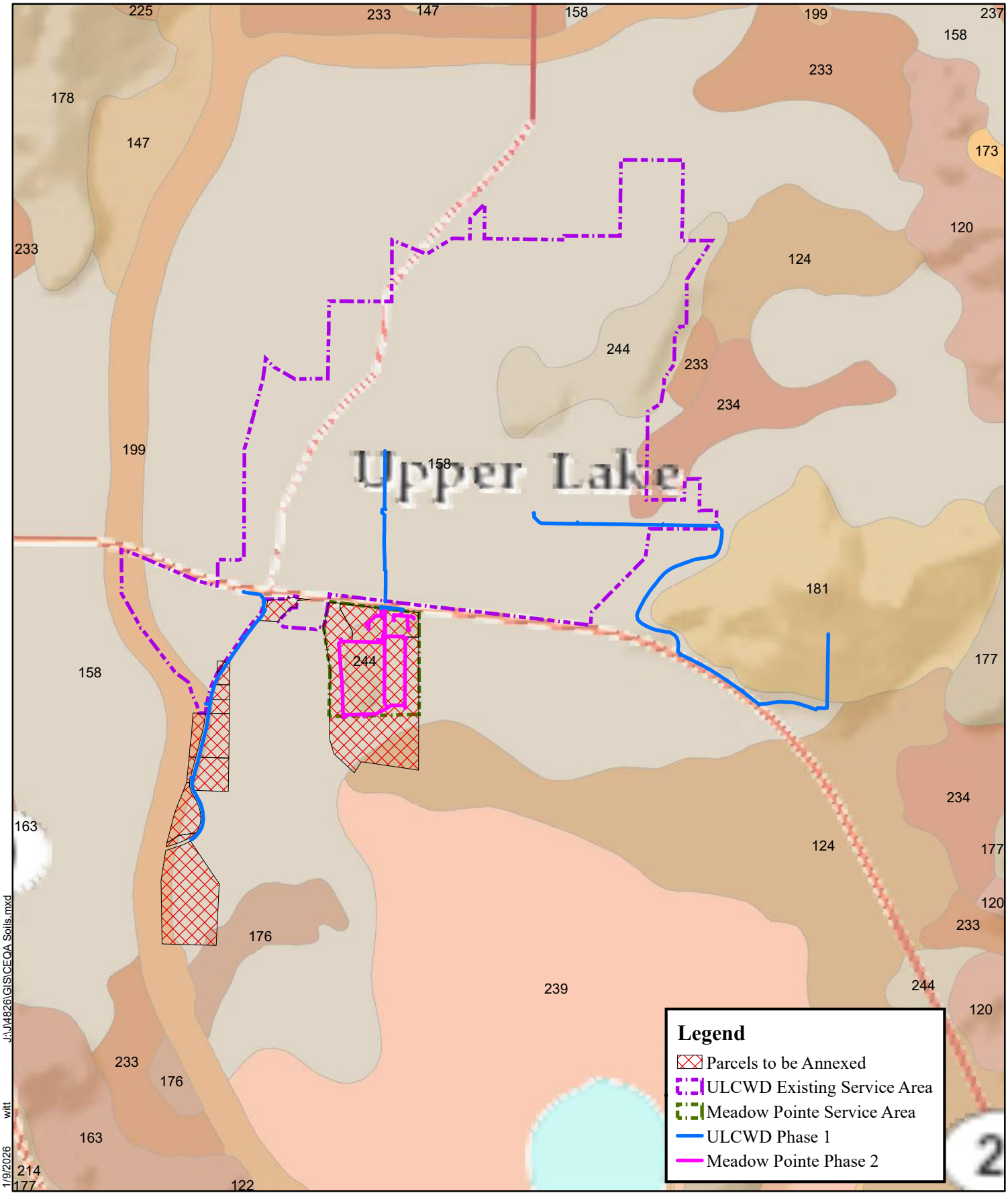
FIGURE VII-1
REGIONAL GEOLOGY

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2025



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

NORTH

0 300 600 1,200 Feet

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FIGURE VII-2
SOILS

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

LIQUEFACTION

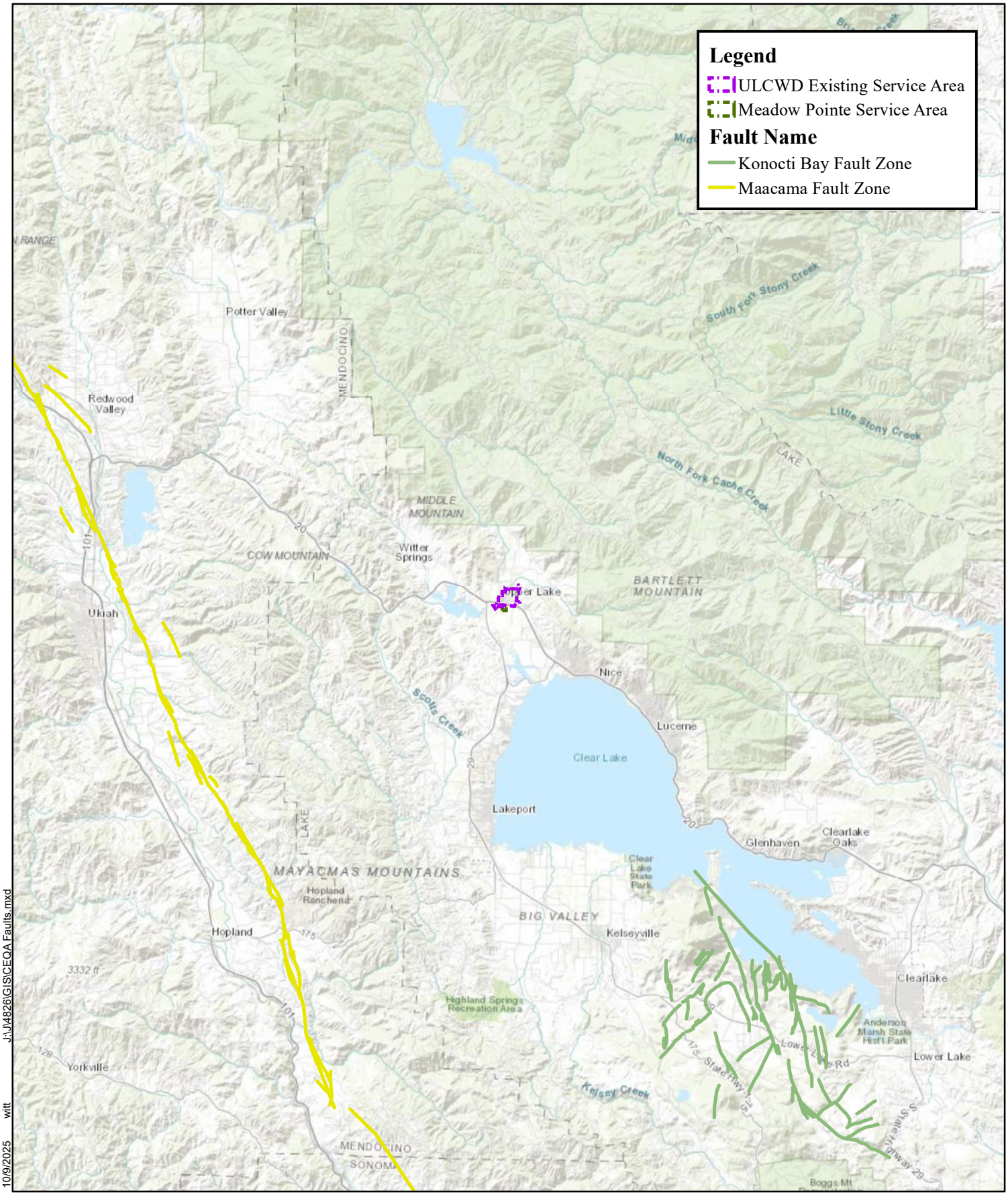
Liquefaction is the process where water is combined with unconsolidated soils, generally from ground motions and pressure, which causes the soils to behave like quicksand. Liquefaction potential is determined from a variety of factors including soil type, soil density, depth to the groundwater table, and the expected duration and intensity of ground shaking. Liquefaction is most likely to occur in deposits of water-saturated alluvium or areas of considerable artificial fill.

SEISMIC CONDITIONS

Like all of Lake County, the project area is within a seismically active area. The nearest faults considered to be 'Holocene-active' (experiencing surface rupture within about the last 11,000 years) are shown below and on Figure VII-3. Other faults in the project area are in the 700,000 to two million years old range and considered less likely to result in seismic activity. Faults with the potential to produce earthquakes are described below.

Fault	Approximate Distance to Fault (miles)	Direction to Fault
Konocti	12.5	Southeast
Mayacama	13	West

Throughout Lake County and the entire Northern California region, ground shaking from earthquakes represents a significant geologic hazard to developments. The intensity of ground shaking will be dependent on several factors such as: 1) distance from the site to the earthquake focus; 2) depth of earthquake focus; 3) earthquake magnitude; 4) response of the underlying soil and rock; and 5) topography and local geologic structure.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Faults: USGS

NORTH

0 1.25 2.5 5 Miles

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FIGURE VII-3

EARTHQUAKE FAULTS

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

Regulatory Setting

FEDERAL REGULATIONS

Clean Water Act 402 and National Pollutant Discharge Elimination System

The CWA is discussed in detail in the Hydrology and Water Quality section of this document. However, because CWA Section 402 is directly relevant to excavation, additional information is provided below. Amendments to the CWA in 1987 added Section 402p, which establishes a framework for regulating municipal and industrial stormwater discharges under National Pollutant Discharge Elimination System (NPDES) program. The EPA has delegated to the State Water Resources Control Board (SWRCB) the authority for the NPDES program in California, which is implemented by the state's nine regional water quality control boards. Under the NPDES Phase II Rule, construction activity disturbing one acre or more must be permitted under the state's General Construction Permit. General Construction Permit applicants are required to prepare a Notice of Intent and a Stormwater Pollution Prevention Plan (SWPPP) and implement and maintain Best Management Practices (BMPs) to avoid adverse effects on receiving water quality due to construction activities, including earthwork.

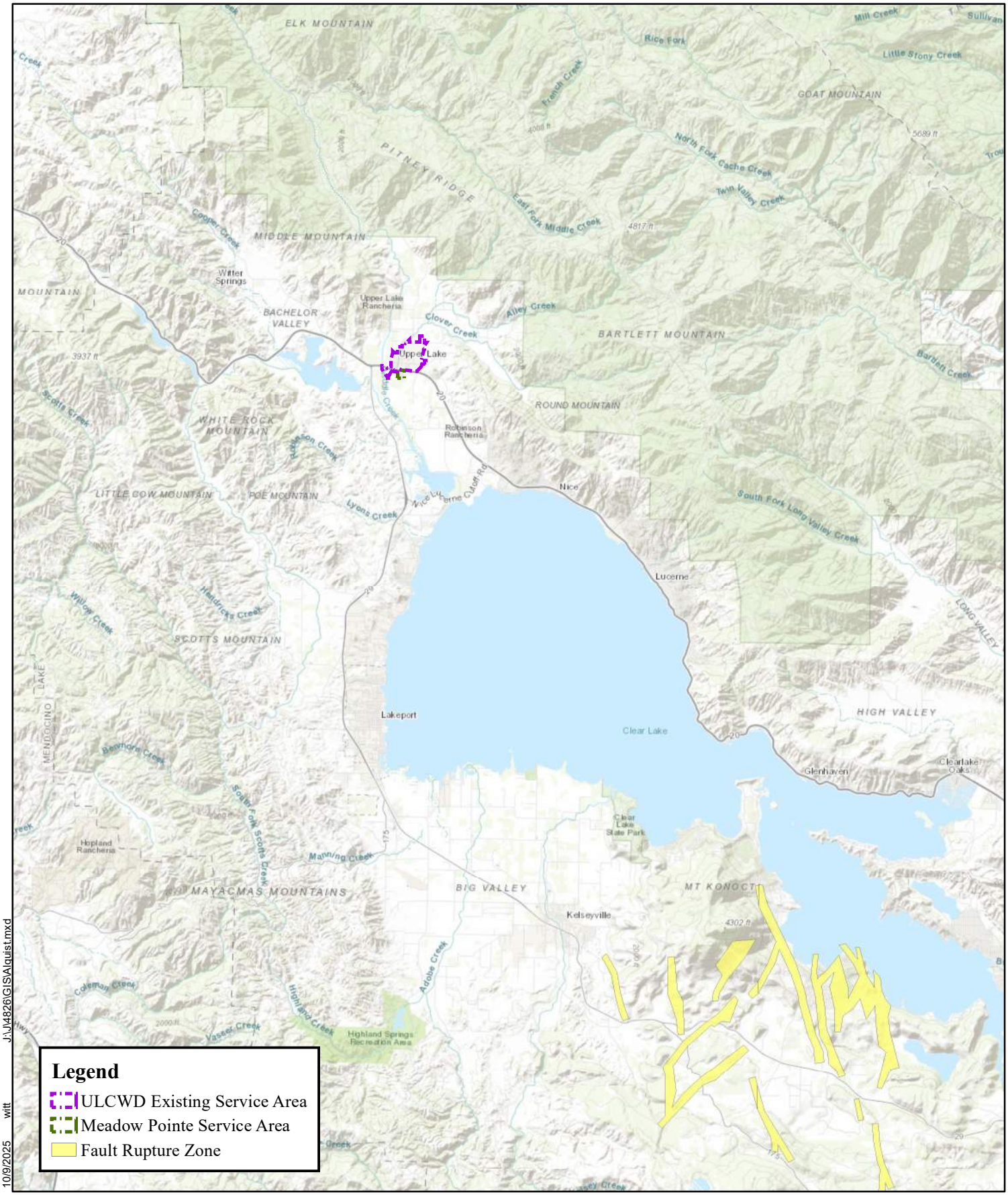
STATE REGULATIONS

Alquist-Priolo Earthquake Fault Zoning Act

The Alquist-Priolo Earthquake Fault Zoning Act of 1972 (prior to January 1, 1994, known as the Alquist-Priolo Special Studies Zones Act – CCR, Title 14, Section 3600) sets forth the policies and criteria of the State of California regarding building within active fault zones mapped pursuant to the Act. The Alquist-Priolo Earthquake Fault Zoning Act outlines cities' and counties' responsibilities in prohibiting the location of developments and structures for human occupancy across the trace of active faults. The policies and criteria are limited to potential hazards resulting from surface faulting or fault creep within Earthquake Fault Zones delineated on maps officially issued by the State Geologist. Figure VII-4 shows the project relative to the nearest mapped fault rupture zone.

Seismic Hazard Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690 2699.6) is intended to reduce damage resulting from earthquakes. The Seismic Hazards Mapping Act addresses earthquake-related hazards, including strong ground shaking, liquefaction, and seismically induced landslides. The state is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Under the Seismic Hazards Mapping Act, permit review is the primary mechanism for local regulation of development. Specifically, cities and counties are prohibited from issuing development permits for sites in Seismic Hazard Zones until appropriate site-specific geologic or geotechnical investigations have been carried out, and measures to reduce potential damage have been incorporated into the development plans.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Department of Conservation

NORTH

0 0.75 1.5 3 Miles

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FIGURE VII-4

ALQUIST PRIOLO ZONES

ULCWD/MEADOW POINTE CONSOLIDATION

OCTOBER 2025

California Building Code

The California Code of Regulations, Title 24, also known as the California Building Standard Code or the California Building Code (CBC), establishes guidance for foundation design, shear wall strength, and other structurally related concerns. The CBC modified regulations for specific conditions found in California and included many more detailed and/or more restrictive regulations. For example, CBC includes common engineering practices requiring special design and construction methods that reduce or eliminate potential expansive soil-related impacts. The CBC requires structures to be built to withstand ground shaking in areas of high earthquake hazards and the placement of strong motion instruments in larger buildings to monitor and record the response of the structure and the site of the seismic activity. Compliance with CBC regulations ensure the adequate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage requirements to control surface drainage and to reduce seasonal fluctuations in soil moisture content.

Analysis

a. Would the project directly or indirectly cause substantial adverse effects, including the risk of loss, injury, or death involving:

a.i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

The project area is not located within an Alquist-Priolo Zone, as shown on Figure VII-4. None of the project components are intended for human occupancy. The project would be required to implement California Building Code Seismic Design Category Requirements standards into the project design for applicable features to minimize hazards associated with potential fault rupture, ground shaking, and liquefaction. Existing water mains are older and in various stages of useful life. Replacement of older water mains and construction of redundant mains and equipment associated with the project would increase the resiliency of the water systems with respect to seismic events by replacing them with infrastructure built to modern standards, a beneficial impact. Based on incorporation of appropriate geotechnical design recommendations and engineering standards, the risk to the project from fault rupture is considered to be less than significant.

a.ii. Strong seismic ground shaking?

Like all of Lake County, the project location is subject to strong seismic ground shaking. As shown on Figure VII-3, there are no faults within ten miles of the project area. While none of the mains cross fault rupture zones, earth shaking from an earthquake on that fault system can be expected.

As indicated in a.i.) above, the project would be designed and constructed in strict adherence with current standards for earthquake-resistant construction and replacement of older water mains and equipment with new mains constructed to current standards would increase the resiliency of the water systems with respect to seismic events. Risk to the project is considered to be less than significant.

a.iii. Seismic-related ground failure, including liquefaction?

As indicated in a.ii.) above, seismic ground shaking could occur in the project area and originate near the project. Localized liquefaction or differential settlement during a very strong earthquake could occur. The tank site is non-alluvial and not at risk, but some system pipe failures could occur in the event of liquefaction. District operational response of quick isolation of failed pipe segments (by means of valves) would be necessary to maintain system operation and fire protection in such an event. Any risks of ground failure would be remediated, as indicated in a.i.) above.

a.iv. Landslides?

The project would primarily be constructed within areas with existing infrastructure and residential development. Landslides are not evident adjacent to project locations and the project would not increase the risk of landslides.

b. Would the project result in substantial soil erosion or the loss of topsoil?

The majority of the project locations are within existing roads or existing developed water infrastructure sites. Stormwater drainage in the area primarily consists of overland flow over the ground and roadway surfaces that concentrate in man-made drainage elements such as roadside gutters and drainage ditches. Some underground stormwater system exists within the urban core of Upper Lake but those structures would not be impacted by the project. Surfaces would be restored to existing conditions once construction is complete to ensure there is no long-term erosion.

The project would have a total disturbance area of approximately 0.75 acre. Coverage under the State Water Resources Control Board (SWRCB) Construction General Permit is triggered by projects over one acre. It is anticipated that the project would not be subject to coverage under the Construction General Permit.

The project would include an erosion control plan to be prepared by the contractor that would be consistent with the Construction General Permit but not subject to reporting requirements. The requirement of an erosion control plan would minimize the potential for erosion-related impacts to surface waters to the extent possible. Because the project would comply with current regulations to limit erosion-related water quality impacts during and after construction, there would be no impact.

c. Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

The project area currently supports the existing development and individual water systems that serve that development. The project would replace existing undersized and leaking water mains and add redundant mains. The proposed project would generally improve or replace water system components to provide additional reliability and reduce water losses. Some new water distribution mains are included in the project but would be designed to current regulations regarding seismic events. Appropriate design according to professional standards and regulations contained in the most recent edition of the California Building Code would ensure that any risk from on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse is less than significant.

d. Would the project be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?

Appropriate design according to professional standards and regulations contained in the most recent edition of the California Building Code would ensure that any risk to project from expansive soils is less than significant. Replacement of existing water mains and construction of redundant mains with new infrastructure meeting existing standards would improve system resiliency over existing conditions.

e. Would the project have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

Wastewater service in the project area is provided by the Northwest Regional Wastewater System managed by the Lake County Special Districts Administration. No new wastewater would be generated by the proposed project. Any new residential construction occurring in the project area would be subject to connection to the Northwest Regional Wastewater System or to septic system permitting through the existing County permitting process.

f. Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

There are no known paleontological resources or unique geologic features in the project area. Mitigation Measure GS1 is included to preserve any such features discovered during construction and reduces any potential impact to less than significant.

Cumulative Impacts

There are no adverse cumulative environmental impacts to geology and soils resulting from implementation of the proposed project.

Mitigation Measures

GS1

The project plans and specifications shall provide that in the event paleontological site indicators are unearthed (vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils) during grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact District. District shall contact a qualified professional geologist or paleontologist immediately after the find. Such consultant shall conduct an evaluation of significance of the site and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from District.

VIII GREENHOUSE GAS EMISSIONS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	□	□	■	□
b. Would the project Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	□	□	□	■

To fully understand global climate change it is important to recognize the naturally occurring "greenhouse effect" and to define the greenhouse gases (GHG) that contribute to this phenomenon. The temperature on Earth is regulated by this "greenhouse effect," which is so named because the Earth's atmosphere acts like a greenhouse, warming the planet in much the same way that an ordinary greenhouse warms the air inside its glass walls. Like glass, the gases in the atmosphere let in light yet prevent heat from escaping.

Greenhouse gases are naturally occurring gases such as water vapor, carbon dioxide (CO_2), methane (CH_4), and nitrous oxide (N_2O) that absorb heat radiated from the Earth's surface. Greenhouse gases are transparent to certain wavelengths of the Sun's radiant energy, allowing them to penetrate deep into the atmosphere or all the way to Earth's surface. Clouds, ice caps, and particles in the air reflect about 30 percent of this radiation, but oceans and land masses absorb the rest (70 percent of the radiation received from the Sun) before releasing it back toward space as infrared radiation. The greenhouse gases and clouds effectively prevent some of the infrared radiation from escaping; they trap the heat near the Earth's surface where it warms the lower atmosphere.

In addition to natural sources, human activities are exerting a major and growing influence on climate by changing the composition of the atmosphere and by modifying the land surface. Particularly, the increased consumption of fossil fuels (natural gas, coal, gasoline, etc.) has substantially increased atmospheric levels of greenhouse gases. Measured atmospheric levels of certain greenhouse gases such as CO_2, NH_4, and N_2O have risen substantially in recent decades. This increase in atmospheric levels of greenhouse gases unnaturally enhances the "greenhouse effect" by trapping more infrared radiation as it rebounds from the Earth's surface and thus trapping more heat near the Earth's surface.

California Implications

According to the Air Resources Board's 2016 California GHG Emissions Inventory, in 2014, total California GHG emissions were 441.5 million metric tons of CO2 equivalent (MMTCO2e), a decrease of 2.8 MMTCO2e compared to 2013. This represents an overall decrease of 9.4 percent since peak levels in 2004. During the 2000 to 2014 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 13.9 tons per person to 11.4 tons per person in 2014; an 18 percent decrease[21]. State regulations have begun lowering GHG California's contribution to global GHG levels but managing GHG emissions remains an ongoing priority in California.

[21] https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

State Regulations

CLIMATE CHANGE REGULATORY FRAMEWORK

In September 2006, Governor Arnold Schwarzenegger signed AB 32, the California Global Warming Solutions Act, which created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 required the California Air Resources Board (ARB) to develop a Scoping Plan, adopted in 2008, that describes the approach California will take to reduce GHGs to achieve the goal of reducing emissions to 1990 levels by 2020. In 2016, the Legislature passed SB 32, which codified a 2030 GHG emissions reduction target of 40 percent below 1990 levels by 2030. The Scoping Plan was updated in 2017. In 2018, Senate Bill 100 set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. Executive Order B-55-18 set a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The Scoping Plan recognizes that local GHG reduction commitments and climate action plans are essential to the state meeting its targeted emissions reductions.

California's energy policies are intertwined with goals of reducing greenhouse gases. These goals were accelerated in 2016 with passage of SB 32 requiring lowering greenhouse gas emissions to 40 percent below 1990 levels by 2030. Further, "In 2018, Senate Bill 100...set a planning target of 100 percent zero-carbon electricity resources by 2045 and increased the 2030 renewables target from 50 percent to 60 percent. On the same day of signing SB 100, then-Governor Brown signed Executive Order B-55-18 with a new statewide goal to achieve carbon neutrality (zero-net GHG emissions) by 2045 and to maintain net negative emissions thereafter. The executive order covers all sectors of the economy... Executive Order B-55-18 follows the spirit of what is required at a global scale to achieve the climate goals of the Paris Agreement, in which signatory nations worldwide agree to sufficiently reduce GHG emissions to avoid catastrophic climate change. This is also consistent with a special report by the Intergovernmental Panel on Climate Change, which found that to avoid catastrophic climate change, global carbon dioxide emissions must decline by about 45 percent below 2010 levels by 2030 and reach net zero by about 2050[22]."

LOCAL REGULATIONS

ARB works with 35 air pollution districts in California to enforce air pollution regulations. The LCAQMD enforces air quality regulations in Lake County. More metropolitan air pollution districts, cities and counties have adopted Local Climate Action Plans consistent with ARB Scoping Plan goals. Lake County developed and adopted a Climate Action Plan in January 2026.

Because the LCAQMD has not developed GHG regulations or a Climate Action Plan, it has not identified a significance threshold for GHG emissions or a methodology for analyzing air quality impacts related to greenhouse gas emissions. While the County has adopted a CAP, there is no established local threshold of significance for GHGs. The adjacent Sacramento Metropolitan Air Quality Management District[23] (SMAQMD) adopted GHG thresholds of significance in 2012 that are contained in the SMAQMD's CEQA Guide[24]. For land development and construction projects, that threshold has been established as 1,100 metric tons per (MT/yr) year for construction and operational phases. Stationary sources (projects that do not involve transportation impacts) have been determined to have an operational threshold of 10,000 MT/yr. The

[22] Ibid.
[23] The Sacramento Metropolitan Air Quality Management District is used here because the BAAQMD has not adopted a threshold for construction-related GHG emissions in its CEQA Guidelines utilized in the Air Quality section of this document.
[24] www.airquality.org/Businesses/CEQA-Land-Use-Planning/CEQA-Guidance-Tools

CEQA Guide also establishes operational screening levels for various projects to determine if a GHG analysis is necessary[25]. While neither the LCAQMD nor Lake County has adopted these thresholds, they are a useful guideline for assessing this project's potential impacts.

Analysis

a. Would the project generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

The SMAQMD does not have screening criteria for municipal water projects. However, under SMAQMD's 1,100 MT/yr threshold, various examples of projects that would not result in significant GHG emissions are provided. For example, 56 residential units, 85 apartment units, or a 57,000 square foot elementary school. As an infrastructure replacement and improvement project, the project is not characteristic of the land development projects contained in the SMAQMD CEQA screening levels for GHGs. Therefore, quantification of project emissions is required. Project construction GHG emissions were modeled using the CalEEMod for linear projects. Emissions shown below assume non mitigated emissions.

Modeled CO2e emissions for the project are shown below and are expected to be 48 MT/yr CO2e, under SMAQMD's 1,100 MT/yr threshold and therefore considered to be less than significant. Because the project replaces existing water distribution systems, provides redundancy and does not induce growth or traffic, operational emissions would be essentially unchanged and were not quantified. It is expected that operational emissions would actually decrease since the new distribution systems would remediate existing leaks in the system, thus reducing electricity associated with pumping and treating water.

SMAQMD Thresholds of Significance			**Project Emissions**	
	Construction Average Daily Emissions (MT/yr)	Operational Annual Emissions (MT/yr)	CalEEMod [26] Construction Emission Estimates (MT/yr)	CalEEMod Operational Emission Estimates (MT/yr)
GHG as CO2e	1,100	1,100	48	Not quantified

b. Would the project conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

Lake County adopted a Climate Action Plan in 2026. Because the project does not exceed the SMAQMD's construction threshold of 1,100 MT/yr and operational emissions would be essentially unchanged, the project would not impede implementation of a local climate action plan. Additionally, the reduction in energy demands associated with reduced pumping and treatment from rectifying system leaks would assist the energy reduction goals of any such plan.

[25] http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf
[26] https://caleemod.com/model

Cumulative Impacts

As indicated in a.) above, the project would result in short-term emission of GHGs associated with project construction. Construction-related emissions are not considered to be cumulatively considerable based on the limited nature of the construction project and emissions expected to below the 1,100 MT/yr threshold.

Mitigation Measures

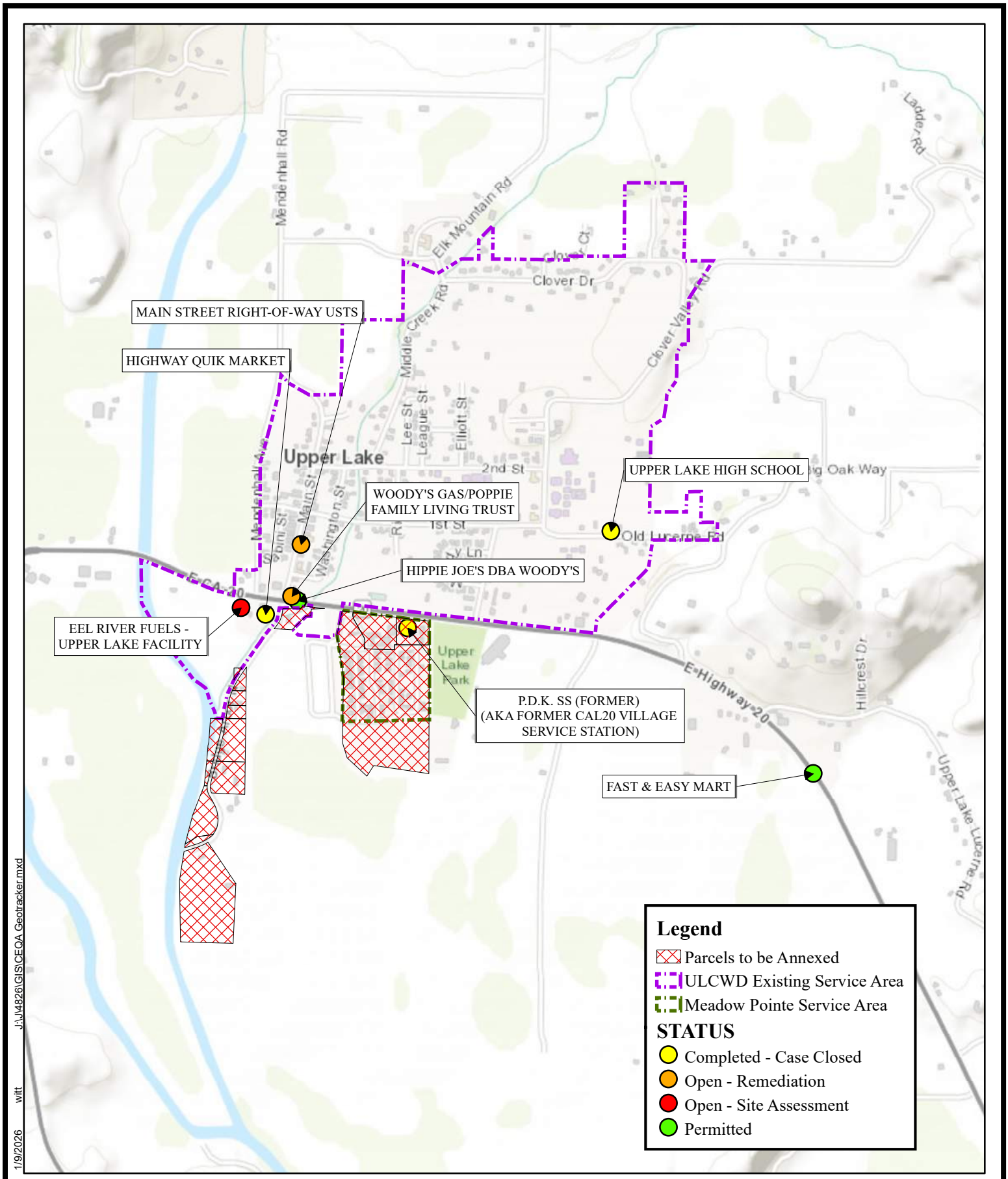
No adverse environmental impacts to greenhouse gas emissions have been identified; therefore, no mitigation is required.

IX HAZARDS & HAZARDOUS MATERIALS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	□	□	□	■
b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	□	■	□	□
c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	□	□	□	■
d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	□	■	□	□
e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	□	□	□	■
f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	□	□	■	□
g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	□	□	□	■

Environmental Setting

The project area is predominantly rural with residential and limited commercial services within Upper Lake. The State Water Board's GeoTracker system implements Government Code Section 65962.5 by identifying the locations of known hazardous materials sites. Sites listed on California's GeoTracker system are shown on Figure IX-1.



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1/9/2026 witt

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Hazardous Materials: Water Resources Control Board GeoTracker (2109)

NORTH

0 0.05 0.1 0.2 Miles

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475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE IX-1
HAZARDOUS MATERIALS SITES

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

REGULATORY SETTING

Federal Regulations

Hazardous materials in the project area are subject to applicable federal regulations, including the Resource Conservation and Recovery Act and the Comprehensive Environmental Response, Compensation, and Liability Act. Other applicable federal regulations are contained primarily in CFR Titles 29, 40, and 49.

State Regulations

California regulations are as stringent as or more stringent than federal regulations. The EPA has granted the State of California primacy oversight responsibility for administering and enforcing hazardous waste management programs. State regulations require planning and management to ensure that hazardous wastes are handled, stored, and disposed of properly to reduce risks to human and environmental health.

Drinking Water

The primary issue driving the project is the State Water Resources Control Board December 15, 2017, notification to Meadow Pointe that they needed to find an alternate, and safe source of water supply within five years. The Meadow Pointe system has two supply wells with documented MTBE and TBA contamination. The contamination came from three leaking underground storage tanks near Meadow Pointe, at Woody's gas station (Woddy's Gas/Poppie Family Living Trust on Figure IX-1), which has since ceased operation. Meadow Pointe' Well 1 is above the allowable drinking water maximum contaminant level (MCL) with an average MTBE concentration of 15.4 μg/l. The EPA sets the MCL for MTBE at 13 μg/l, while California sets a Secondary Maximum Contaminant Level (SMCL) limit of 5 μg/l. The MTBE concentration in Well 2 is reportedly below the MCL and SMCL. However, the wells are 12 feet apart and due to the moving nature of the plume, it is likely Well 2 will experience higher concentrations. Similar concentrations of MTBE have been detected in many of the residential wells along Bridge Arbor. Although Meadow Pointe also has TBA contamination, the EPA and California have not established an MCL or SMCL for TBA at this time. The TBA levels are above what is thought be an acceptable limit.

Analysis

a. Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

The project's primary purpose is to rectify the existing MTBE health hazard associated with the Meadow Pointe and Bridge Arbor parcels. The project would improve existing water distribution systems and other water system infrastructure within the District, improvements necessary to serve Meadow Pointe and Bridge Arbor. Municipal water systems are not generally associated with hazardous materials.

Construction of the proposed project would include the use and short-term storage of hazardous materials. These materials could include, but are not limited to, lubricants, adhesives, paints, asphalt, fuel, and toxic solvents. The proposed project is required to comply with federal, state, and local regulations regarding the storage, handling, disposal, and cleanup of hazardous materials. No routine transport, use, or disposal of hazardous materials would be associated with the project and the projects would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

b. Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

As indicated in a.) above, the project would not introduce new long-term hazardous materials or hazardous materials handling. The project would make improvements to the existing water systems that do not currently, and would not in the future, utilize hazardous materials.

There is the potential for a fuel/oil spill during construction from construction vehicles and equipment. During construction, hazardous materials would be used to fuel and maintain construction vehicles and there would be the potential for spills of those materials as well as hydraulic fluid from the machinery. Mitigation Measure HM1 would reduce such impact to a less than significant level.

c. Would the project emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

The project would not result in emissions or handling of hazardous materials within one quarter mile of an existing or proposed school. Portions of the proposed water mains would be constructed in Old Lucerne Road, adjacent to Upper Lake High School and Upper Lake Junior High. Upper Lake Elementary School is also in close proximity to potential construction activities. Use of hazardous materials associated with the project are those commonly related to construction projects and would not pose a hazard to the schools. The project includes improvements of the existing water systems and would not emit hazardous emissions or handle hazardous or acutely hazardous materials.

d. Would the project be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

There are eight reported hazardous materials sites listed by the State Water Resources Control Board GeoTracker system as shown on Figure IX-1. Of these sites, three are closed (remediated) and two are actively permitted sites (gas stations). The remaining four (Eel River Fuels, Main Street Right-of-way USTS, Woody's Gas, P.D.K SS) are actively monitored and/or in the process of remediation. All are due to leaking underground fuel tanks. Of primary concern to the project is the Woody's Gas site (T0603300077) that is the source of MTBE contamination in the Meadow Point and Bridge Arbor wells. The project is intended to rectify the water quality concerns. The site is an open Leaking Underground Fuel Tank (LUST) site monitored by the CVRWQCB. The abatement/monitoring process began in 1997 and has continued to date of this IS/MND. The project will not alter the site or the monitoring program, only address the contaminated ground water wells by providing an alternative source.

Based on the location of the Geotracker sites, there is the possibility that hydrocarbon contaminated soils could be encountered during construction. These soils would not represent a hazard to new water main pipe materials. Mitigation Measure HM1 requires the contractor to be provided with known site locations and that the contractor develop a plan to handle potential contamination and have personnel on-site that are experienced with handling hydrocarbon contaminated soils. In the event contaminated soils are discovered, the contractor shall cease work and contact the District and the Regional Board to implement the plan to dispose of the soils and ensure worker safety and protection of the environment.

e. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The nearest public use airport, Lampson Field, is located between the communities of Kelseyville and Lakeport and is approximately 11 linear miles south of the project area. No portions of the project are located within Lampson Field's airport land use plan area. Therefore, there would be no impact.

f. Would the project impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

The Lake County Emergency Response Plan facilitates response by the Lake County Department of Health Services when medical and health services are required as a result of catastrophic events. The primary threats to Lake County include earthquakes and aftershocks, hazardous materials releases, transportation accidents, levee or dam failure and floods, landslides, national security incidents, and wildfires. An efficient roadway and circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles. The District shall require that the contractor develop a traffic management plan that ensures the existing roadway system and Highway 20 within the project areas shall be kept accessible to residents and to all first responder units in the case of a wildland fire, earthquake event, hazardous materials release, transportation accident, landslide or national security incident by the incorporation of half-width improvements and traffic control utilization. Additionally, encroachment permits required from the County and Caltrans would ensure appropriate traffic control and emergency access are maintained. As such, this impact would be less than significant.

g. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

The project is intended to improve the two existing water systems, provide redundancy to the existing District system storage and increase fire flow pressures in the system. The District does not currently have adequate fire flows in portions of its system and there is no redundant water main to the storage tanks. Once completed, the project would primarily be underground and would not increase the risk of wildland fires. Implementation of the project would increase the community's ability to respond to fires by increasing fire flows in the project area and providing system redundancy.

Cumulative Impacts

There are no adverse cumulative environmental impacts to or from hazards/hazardous materials resulting from implementation of the proposed project.

Mitigation Measures

HM1

The contractor shall be required to follow the provisions of § 5163 through 5167 of the General Industry Safety Orders (California Code of Regulations, Title 8) to protect the project area from being contaminated by accidental release of any hazardous materials.

In general, the Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the District immediately upon discovery of any potential soil or groundwater contamination.

If hazardous materials are encountered during construction or occur as a result of an accidental spill, the contractor shall halt construction immediately, notify the District, and implement remediation in accordance with the project specifications and applicable requirements of the Regional Board. Disposal of all hazardous materials shall be in compliance with current California hazardous waste disposal laws.

The contractor shall be provided the location of all known LUST sites in the project area. The contractor shall be required to prepare a plan for construction near and adjacent to known hazardous materials sites where there is potential to encounter contaminated soils or groundwater and that plan shall be reviewed and approved by the construction manager. The contractor shall have personal on-site experienced with identifying and handling hydrocarbon-contaminated soils. In the event evidence of hydrocarbon-contaminated soils are identified, the contractor shall contact the construction manager and the Reginal Board. Work in that area shall cease until the soils handling plan can be implemented.

X HYDROLOGY & WATER QUALITY

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	□	■	□	□
b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	□	□	□	■
c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:				
i. result in a substantial erosion or siltation on- or off-site?	□	□	□	■
ii. substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?	□	□	□	■
iii. create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	□	□	□	■
iv. impede or redirect flows?	□	□	□	■
d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?	□	□	□	■
e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	□	■	□	□

Environmental Setting

SURFACE WATER

The District is within the Clear Lake watershed. Clear Lake is located within, and tributary to, the Sacramento River Basin. The Sacramento River Basin covers approximately 27,210 square miles and includes the entire area drained by the Sacramento River, including all watersheds tributary to the Sacramento River north of the Consumnes River watershed. The basin also includes the closed basin of Goose Lake and the drainage sub-basins of Cache and Putah creeks. The principal streams are the Sacramento River and its larger tributaries, the Pit, Feather, Yuba, Bear, and American rivers to the east, and Cottonwood, Stony, Cache, and Putah creeks to the west. Major reservoirs and lakes include Shasta, Oroville, Folsom, Clear Lake, and Lake Berryessa.

Upper Lake is located near the bottom of the Clover Creek and Salt Flat Creek-Middle Creek watersheds. Numerous streams are located within and surrounding the project with Clover Creek running through Upper Lake and Middle Creek running along the west. Surface waters are shown on Figure X-1.

There are no designated wild or scenic rivers in the immediate project area. Cache Creek is designated as a wild or scenic river approximately three miles downstream of Clear Lake, as shown on Figure X-2.

GROUNDWATER RESOURCES

The District's water supply is from two wells, as described in the Background section of this document. Meadow Pointe's two water wells are contaminated or at threat of being contaminated by MTBE and a new water source is required.

As shown on Figure X-3, the project is located in the Upper Lake Valley Groundwater Basin, supported by a substantial watershed. Both water systems draw groundwater from the Upper Lake Groundwater Basin, a non-adjudicated basin. California Groundwater Bulletin 118 (2004) describes the basin characteristics. Recharge is primarily from Middle Creek, Clover Creek and Alley Creek. The storage capacity is estimated at 10,900 acre-feet with a usable storage capacity estimated at 5,000 acre-feet. A 1995 Department of Water Resources groundwater budget estimated 4,100 acre-feet is used for agriculture and 190 acre-feet is used for municipal and industrial uses, including the Meadow Pointe and District withdrawals.

FLOODING

Upper Lake is located within the Middle Creek Flood Control Project, a system of 14.4 miles of levees and pumps that diverts Middle Creek and Clover Creek around the town constructed in the 1950s and 60s. Currently, only minor portions of the District are located within a designated FEMA floodplain, as shown on Figure X-4. The Middle Creek Flood Damage Reduction and Ecosystem Restoration Project is in the property acquisition stages of restoring the natural floodway and wetland environment south of Upper Lake.

Regulatory Setting

FEDERAL REGULATIONS

Clean Water Act

Important applicable sections of the federal CWA (33 USC 1251–1376) are identified below:

- Sections 303 and 304 provide water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the CWA. Certification is provided by the Regional Water Quality Control Board (RWQCB).
- Section 402 establishes the NPDES permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is administered by the RWQCB.

State Water Resources Control Board

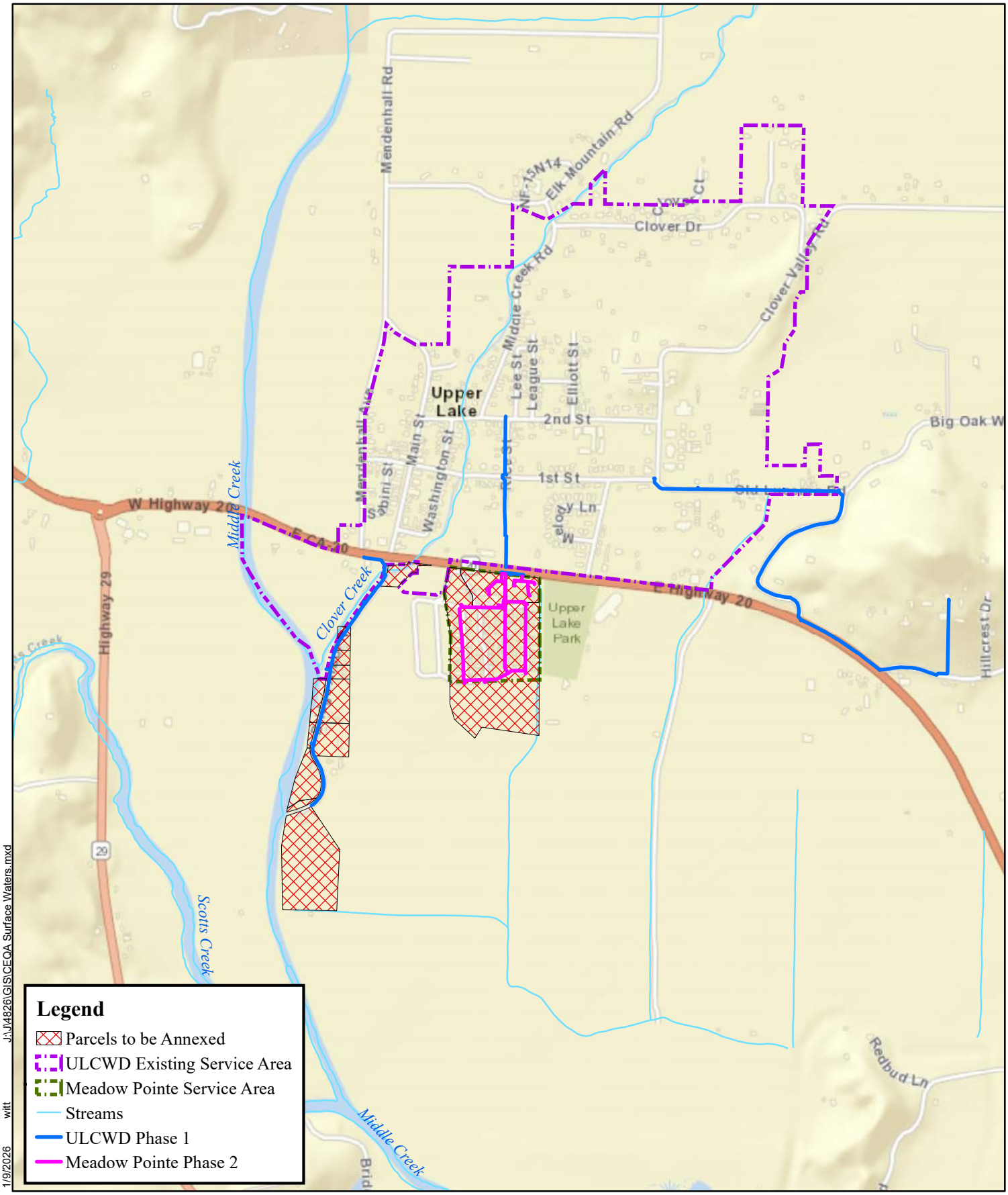
The State Water Resources Control Board (SWRCB) is responsible for implementing the Clean Water Act and issues NPDES permits to cities and counties through regional water quality control boards. The project location is regulated by the Central Valley Regional Water Quality Control Board (CVRWQCB).

The SWRCB has issued a statewide General Permit (Water Quality Order No. 99-08-DWQ) for construction activities within the state. The Construction General Permit (CGP) is implemented and enforced by the RWQCBs. The CGP applies to construction activity that disturbs one acre or more and requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) that identifies best management practices (BMPs) to minimize pollutants from discharging from the construction site to the maximum extent practicable.

Lake County is listed by the CVRWQCB as an NPDES Phase II program municipality that must comply with Water Quality Order No. 2013-0001-DWQ pertaining to post-construction stormwater best management practices (BMPs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems. Permitees must meet the requirements in Provision D of the General Permit which require the development and implementation of a Storm Water Management Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable. The SWMP must include the following six minimum control measures:

- Public Education and Outreach on Stormwater Impacts
- Public Involvement/Participation
- Illicit Discharge Detection and Elimination
- Construction Site Stormwater Runoff Control
- Post-Construction Stormwater Management in New Development
- Redevelopment and Pollution Prevention/Good Housekeeping for Municipal Operations.

A SWMP was completed by Lake County, and a complete application was acknowledged by the SWRCB with a staff recommendation for approval, effective October 2003. The Lake County Clean Water Program (LCCWP) Stormwater Program was also established as a joint effort among the Lake County Watershed Protection District, Lake County, the City of Clearlake, and the City of Lakeport to reduce the impacts of increases in peak flows from development and damage caused by polluted stormwater runoff.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

NORTH

0 0.05 0.1 0.2 Miles

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FIGURE X-1
SURFACE WATERS

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

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witt

7/17/2026

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Scenic Rivers: California Department of Fish and Wildlife (2017)

NORTH

0 2.5 5 10 Miles

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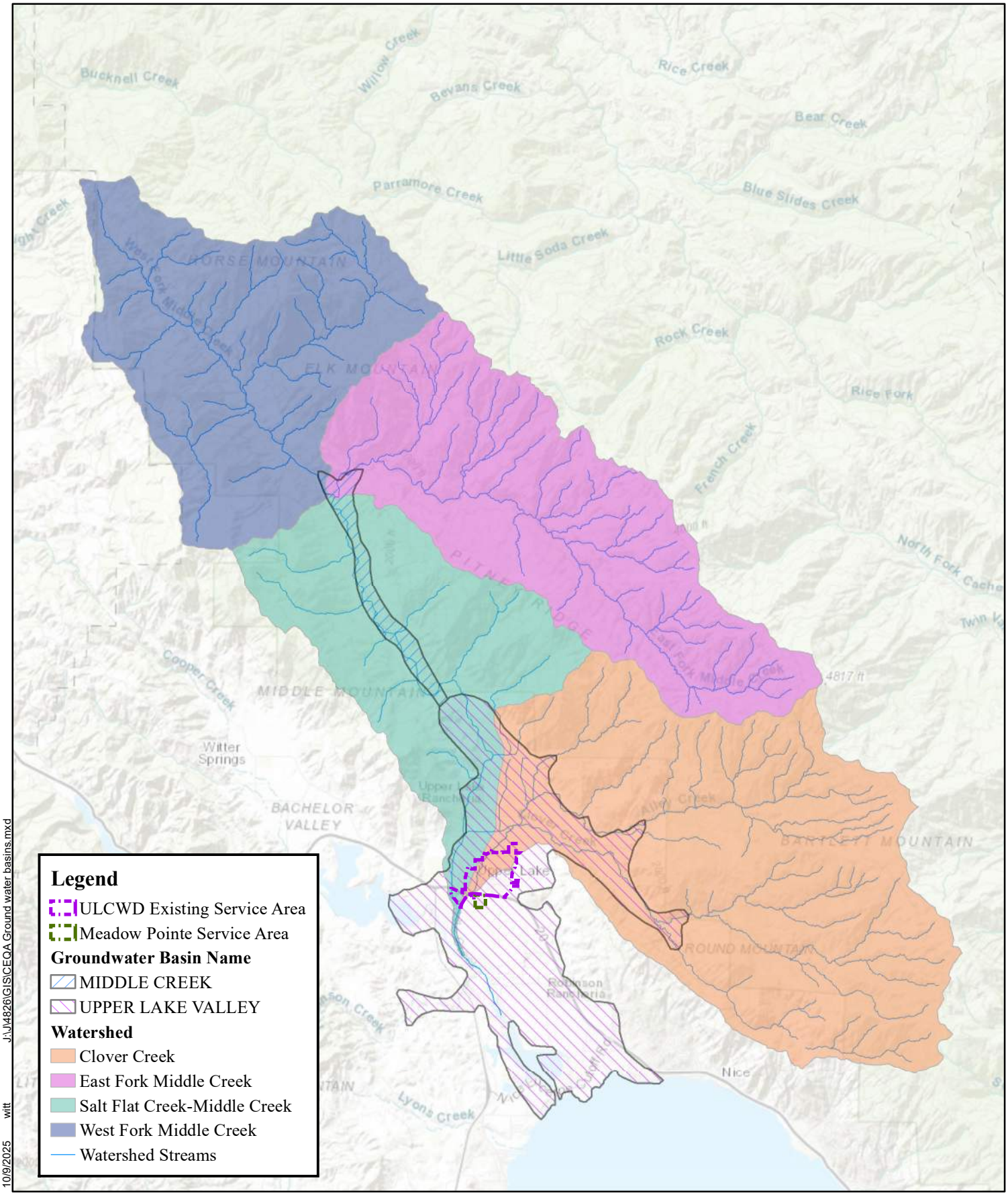
FIGURE X-2
SCENIC RIVERS

ULCWD/MEADOW POINTE CONSOLIDATION
JULY 2026



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Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Ground Water Basins: California Division of Water Resources (2018)

NORTH

0 0.5 1 2 Miles

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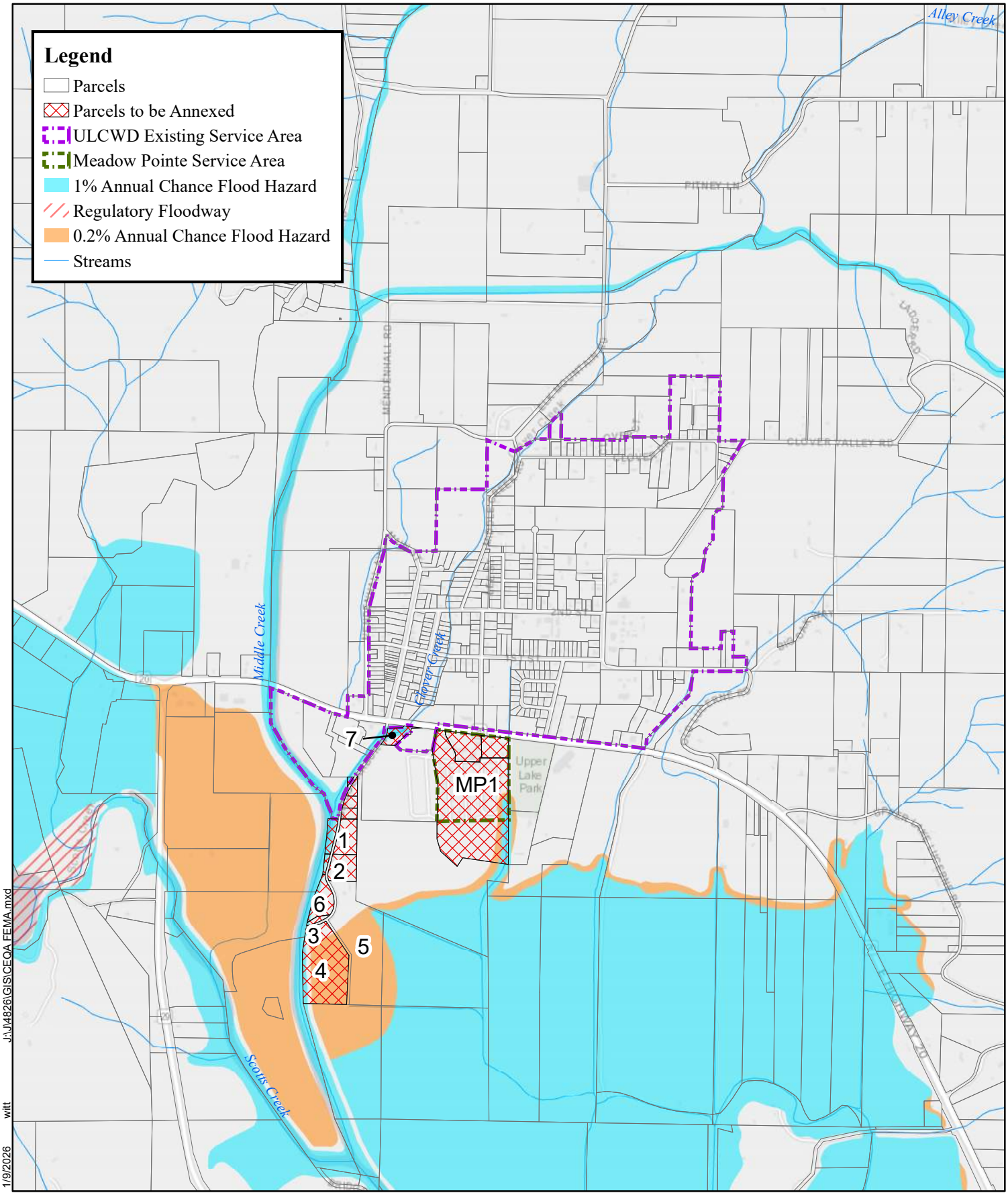
4175 Aviation Blvd., Suite 1 (B), Santa Rosa, CA 95403

FIGURE X-3
GROUNDWATER BASINS & WATERSHED

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Flood Plains: FEMA (2019)

NORTH

0 375 750 1,500 Feet

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FIGURE X-4
FEMA FLOOD ZONES

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

STATE REGULATIONS

Porter-Cologne Water Quality Act

The State of California's Porter-Cologne Water Quality Control Act (California Water Code, Section 13000 et seq.) provides the basis for water quality regulation in California. This Act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Based on the report, the RWQCBs issue waste discharge requirements to minimize the effect of the discharge.

Analysis

a. Would the project violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

The project would not have a long-term impact to water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality. The project includes improvements to two existing public water systems to bring Meadow Pointe into regulatory compliance as well as replace or improve undersized infrastructure. Operation of state-permitted public water systems generally does not result in violation of water quality standards and such systems are not associated with the need for waste discharge requirements. The project would not increase population growth in the project area that would result in any significant increase of groundwater withdrawals or introduce new activities in the project area that would result in degradation of surface or groundwater quality. Any such impacts would be less than significant.

Construction related discharges and erosion are also regulated. The project would have the potential to cause construction-related violations of water quality standards. Implementation of the proposed projects would involve excavation, grading, and other construction activities involving slope and soil disturbance at all locations that could impact water quality by increasing the potential for erosion and sedimentation. Slope and soil disturbance associated with construction activities may cause accelerated soil erosion and sedimentation and/or the release of pollutants to downstream properties and facilities that could impact water quality standards during construction. Most of the project would be constructed in or adjacent to existing roadways and erosion potential would be limited. Post-construction, surfaces would be returned to previous conditions, limiting the potential for long-term erosion.

The project would have a total disturbance area of approximately 0.75 acre. Coverage under the State Water Resources Control Board (SWRCB) Construction General Permit is triggered by projects over one acre, so would not be applicable to the project. The project would include an erosion control plan to be prepared by the contractor that would be consistent with the Construction General Permit but not subject to reporting requirements. The requirement of an erosion control plan would minimize the potential for erosion-related impacts to surface waters to the extent possible. Because the project would comply with current regulations to limit erosion-related water quality impacts during and after construction, there would be no impact.

The potential for water quality impacts associated with stream crossings is assessed in the Biological Resources section.

b. Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Both water systems draw groundwater from the Upper Lake Groundwater Basin, a non-adjudicated basin. California Groundwater Bulletin 118 (2004) describes the basin characteristics. Recharge is primarily from Middle Creek, Clover Creek and Alley Creek. The storage capacity is estimated at 10,900 acre-feet with a usable storage capacity estimated at 5,000 acre-feet. A 1995 Department of Water Resources groundwater budget estimated 4,100 acre-feet is used for agriculture and 190 acre-feet is used for municipal and industrial uses, including the Meadow Pointe and District withdrawals. Redistribution of Meadow Pointe groundwater withdrawals to the District wells would not increase the total groundwater withdrawals from the aquifer. Consolidation would therefore have no impact on the groundwater basin.

The project is not growth inducing and would not increase existing water demands or increase demands on groundwater levels in the project area or elsewhere due to growth. The project does not introduce any significant impervious surfaces and would not substantially interfere with groundwater recharge or groundwater basin management. Any such impact would be less than significant.

Replacement of the distributions system in Meadow Pointe would address existing deficiencies with the existing distribution system. The reduction of leaks associated with the existing mains would reduce overall water losses and reduce production demands. Additionally, implementation of remote read meters would assist water conservation efforts. Both of these improvements would reduce groundwater withdrawals from existing levels. This is considered a beneficial impact to groundwater.

c. Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

c.i. result in a substantial erosion or siltation on- or off-site?

The project would not substantially alter the existing drainage at any of the project locations. As indicated in a.) above, the project would comply with all permitting requirements to reduce the potential of erosion or siltation, consistent with regulations.

c.ii. Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite?

The project would not substantially alter the existing drainage pattern of the project locations or introduce new impervious surfaces that could substantially increase the rate or amount of surface runoff or result in flooding on- or off-site. As shown on Figure X-4, none of the project locations are within or adjacent to designated flood zones and the project is located north of the Middle Creek Flood Damage Reduction and Ecosystem Restoration Project. Due to the subterranean nature of water mains, they would not impede floodwaters that would increase on- or off-site flooding. Other project elements would similarly not impact on- or off-site flooding.

c.iii. Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

The project would not significantly alter existing grades in the project area or introduce any significant impervious surfaces that would impact local stormwater systems or result in substantial additional sources of polluted runoff. There is currently no post-construction stormwater treatment in the project area, and none is proposed by the project due to its subterranean nature and lack of significant new impervious surfaces.

c.iv. Would the project impede or redirect flows?

Minor portions of the project area are within a mapped 100-year flood hazard area, as shown on Figure X-4. However, proposed infrastructure is not in flood hazard areas and will generally be underground. The project would not impede or redirect flows.

d. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation?

Project water main locations are not within a mapped 100-year flood hazard areas. The project is not in an area subject to inundation by seiche, tsunami or mudflows.

e. Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Please see a.), above.

Cumulative Impacts

There are no adverse cumulative environmental impacts to hydrology/water quality resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to hydrology and water quality have been identified; therefore, no mitigation is required.

XI LAND USE & PLANNING

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project physically divide an established community?	□	□	□	■
b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	□	□	□	■

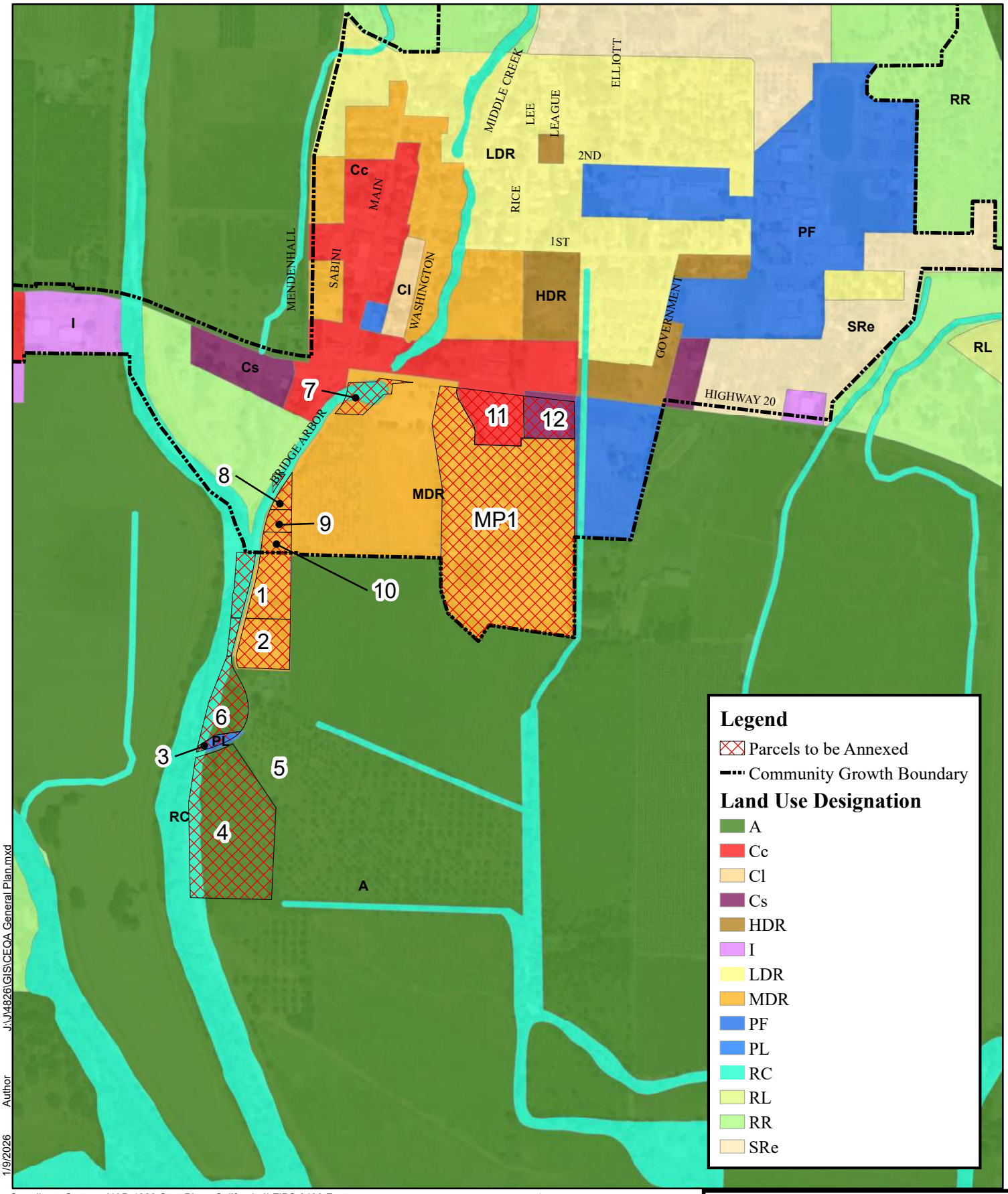
Environmental Setting

Development in the project area is governed by the County of Lake General Plan and zoning ordinance and the Upper Lake—Nice Area Plan. General Plan land use designations are shown on Figure XI-1. The project area zoning includes the following designations, as shown on Figure XI-2:

Zoning Designations in Project Area
APZ – Agricultural Preserve District
C2 – Community Commercial District
C3 – Service Commercial District
CH – Highway Commercial District
M2 – Heavy Industrial
O – Open Space District
PDR – Planned Development Residential District
R1 – Single-Family Residential District
R2 – Two-family Residential
R3 – Multi-family Residential
RL – Rural Lands District
RR – Rural Residential District
SR – Suburban Reserve

The project area is largely built-out with residential and limited commercial uses within the designated Upper Lake Community Growth Boundary, defined on Figure 3-12 of the General Plan and shown on Figure XI-1. The community has an elementary school, middle school and high school that support Upper Lake and surrounding rural areas. Highway 20 and Main Street are the primary commercial corridors in the community.

Currently, the District maintains service to approximately 400 customers. Meadow Pointe provides service to approximately 91 connections. Bridge Arbor parcels would include an additional nine parcels. The potential for growth inducement associated with the project was described in the Growth Inducement Potential section of this document.



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Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

NORTH

0 205 410 820 Feet

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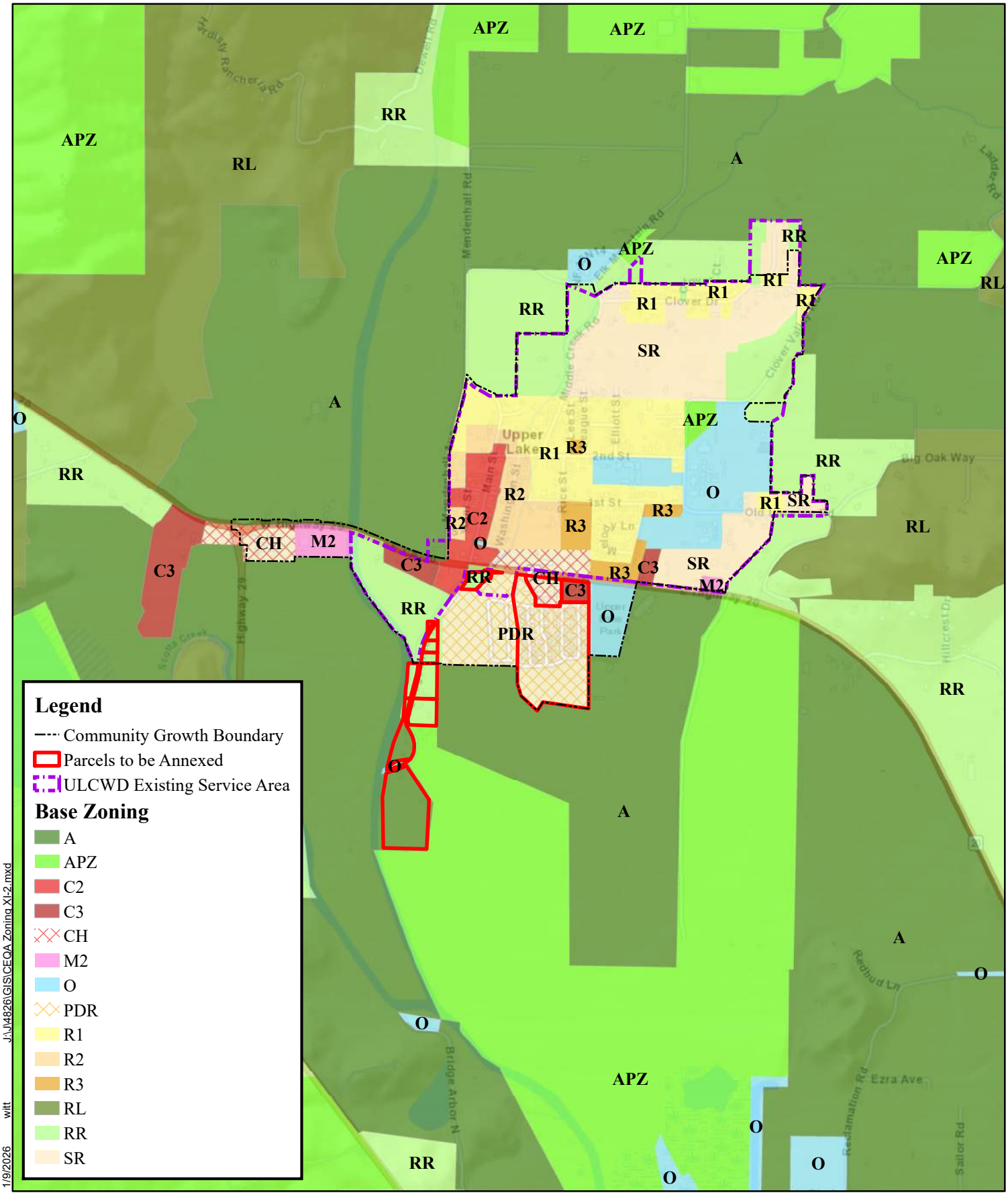
FIGURE XI-1
GENERAL PLAN

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Zoning: Lake County GIS

NORTH

0 375 750 1,500 Feet

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FIGURE XI-2

ZONING

ULCWD/MEADOW POINTE CONSOLIDATION
JANUARY 2026

Analysis

a. Would the project physically divide an established community?

The District and Meadow Pointe water systems serve an established community. Parcels along Bridge Arbor and the Meadow Pointe parcels are also part of the established community. The project's primary purpose is to rectify the existing health hazard associated with MTBE contamination in Meadow Pointe and Bridge Arbor's water source. Provision of safe drinking water to the Meadow Pointe and Bridge Arbor residents is beneficial to preserving the existing established community.

The project would occur within existing roadways or acquired easements in an existing community within a defined Community Growth Boundary. The overall project would bring portions of the existing water systems up to current regulatory standards and assist the District in providing safe and reliable drinking water as well as expanding fire protection in the project areas. Roadways where water mains would be installed would be restored upon completion of the project. Implementation of the overall project would support the existing community, a beneficial impact.

b. Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

A discussion of the potential growth inducing impacts of the project are required to respond to this question as growth can lead to environmental impacts and conflicts with land use plans, policies and regulations beyond those immediately associated with the project. A growth analysis is provided earlier in this document under the Growth Inducing Potential. In short, the project would not induce growth in the community. Some potential exists at the mobile home park for additional units but would require a major use permit and be subject to its own environmental analysis. Because the entire mobile home park parcel is within the Community Growth Boundary, programmatic environmental review of that parcel was included in the County's General Plan EIR.

The project would not conflict with any applicable land use plan, policy or regulation. All project components occur within public right-of-way or on parcels owned (or to be acquired through easement) by the District. Water system uses are consistent with applicable planning policies and allow provision of public utilities to areas already built out. The project is generally located within an established Community Growth Boundary and consistent with the General Plan and provision of water services is essential to the ongoing residents of the community. Bridge Arbor parcels are outside of the Community Growth Boundary but would be served to correct MTBE drinking water issues. All of those parcels are already built out to existing limits of their respective zoning designation. The project would not cause additional growth that would conflict with any land use plan, policy or regulation.

The project includes application to LAFCO to annex parcels assessed herein and result in a coincident service are and sphere of influence.

Cumulative Impacts

There are no adverse cumulative environmental impacts to land use and planning resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to land use and planning have been identified; therefore, no mitigation is required.

XII MINERAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	□	□	□	■
b. Would the project result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	□	□	□	■

Environmental Setting

Lake County is historically known for quicksilver mining operations that occurred in the 19th and 20th Centuries. Gold was also a mineral that was mined in Lake County. The most notable quicksilver mine was the Sulphur Bank Mine located near Clearlake Oaks. This mine started operations in 1856 and was established to originally mine borax, but was then retooled to mine for sulfur. Mercury was mined intermittently from 1873 to 1957, when the mine ceased operations. The Sulphur Bank Mine is both a California Historical Landmark and a superfund site. More recently, the McLaughlin Gold Mine located east of the unincorporated community of Lower Lake and within both Lake and Napa Counties was operated by the Homestake Mining Company from 1985 until 1996.

There are no designated quarry resource areas or existing quarries in the project area contained in the Aggregate Resources Management Plan. Middle and Clover creeks were assessed in the Aggregate Resources Management Plan[27]. Both creeks provide important sources of aggregate for Lake County.

[27] *Lake County Aggregate Resources Management Plan*. County of Lake. November 19, 1992.

Analysis

a. Would the project result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?

The project sites do not include any designated mineral resource that would be of value to the region and the residents of the state. The project would occur within the developed community of Upper Lake and would not affect the availability of any such resource.

b. Would the project result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

The Aggregate Resource Management Plan includes mile 6.74 to mile 11.55 of Middle Creek, upstream of Upper Lake. Clover Creek is channelized within the project area for flood control. While portions of both creeks are located within Upper Lake, neither are suitable for mineral recovery within the project extents due to existing development.

Cumulative Impacts

There are no adverse cumulative environmental impacts to mineral resources resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to mineral resources have been identified; therefore, no mitigation is required.

XIII NOISE

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	□	■	□	□
b. Would the project result in generation of excessive ground borne vibration or ground borne noise levels?	□	□	□	■
c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	□	□	□	■

Environmental Setting

This section includes a description of the terminology and concepts related to noise and vibration impacts that are considered in the analysis. This section also includes a discussion of the existing environmental conditions related to noise-sensitive receptors and ambient conditions found in rural areas and small communities such as the project vicinity.

NOISE-SENSITIVE USES

Noise-sensitive land uses in the project area are nearby single-family residences and the elementary, middle and high schools. There are residential uses located near or adjacent to all the project locations.

NOISE CONDITIONS

Existing ambient sound levels in the project area can be considered typical of a rural residential and small community environments. Sources of noise in the area come primarily from traffic along local two-lane roadways, Highway 20 and the limited commercial areas.

CONSTRUCTION NOISE

The types of equipment that would be used to construct the proposed pipeline include asphalt/concrete trucks, backhoes, compactors, compressors, 10-wheel dump trucks, tracked excavators, forklifts, front-end loaders, jackhammers, paving equipment, flat-bed delivery trucks (pickup trucks), and water trucks.

The table below presents the typical noise levels for the construction equipment listed above based on a worst-case scenario including several pieces of the loudest equipment (running simultaneously). This includes the typical measured A-weighted Lmax noise levels (maximum noise level) that would occur at a 50-foot distance from the construction site. The acoustical use factor is the fraction of time that the equipment would typically be in use over a 1-hour period.

Equipment	Acoustical Use Factor	Typical Noise Level (Lmax)[1]
Asphalt/Concrete Truck[2]	40%	76
Backhoe	40%	78
Compactor	20%	83
Compressor	40%	78
Crane	16%	81
Dump Truck	40%	76
Excavator	40%	81
Forklift[3]	40%	75
Front-End Loader	40%	79
Jackhammer	20%	89
Paver	50%	77
Pickup Truck	40%	75
Roller	20%	80
Water Truck[2]	40%	76

Source: Federal Highway Administration 2006

[1] dBA, A-weighted decibel level (measured at 50 feet)

[2] Based on data for dump truck

[3] Based on data for pickup truck

OPERATIONAL NOISE

During operation, the proposed project would not create noise that would be audible. Water mains would be installed below ground and do not emit noise. Other water system improvements similarly do not result in noise generation.

Regulatory Setting

LOCAL REGULATIONS

Lake County General Plan Noise Exposure Limits

In accordance with the State Guidelines for General Plans, the Lake County General Plan provides guidance for the acceptability of projects within specific noise level criteria. Noise associated with construction activities occurring between 7:00 a.m. and 7:00 p.m. are exempted from the provisions of the Lake County noise ordinance.

Analysis

a. Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

The project would not result in any significant long-term increases in noise levels in the project vicinity. None of the project components are operationally associated with noise generation. New and replacement water mains would be located below ground and do not create noise. Well site improvements are similarly not associated with noise.

Homes in the project vicinity would be subject to construction-related noise while construction is occurring in their proximity. It is anticipated that the pipeline construction would average approximately 200 feet per day so no one location would be impacted by construction noise for more than a few days at a time. Provided the general construction activities (as defined by the County's noise ordinance) occur between 7:00 a.m. and 7:00 p.m., there would be no statutory noise impact related to general construction activities associated with the project. Implementation of Mitigation Measure N1 would further reduce construction-related noise.

b. Would the project result in generation of excessive ground borne vibration or ground borne noise levels?

Implementation of the project would not result in the exposure of people to, or the generation of, ground borne vibration or noise levels. No pile driving, blasting or similar construction techniques that would generate such vibration are required for the project.

c. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

There are no active public use airports within two miles of the project area, and the project area is not contained in an airport land use plan. The nearest airport is Lampson airport, approximately 11 miles southwest of the project. The project would not alter the existing noise environment resulting from air traffic.

Cumulative Impacts

There are no adverse cumulative environmental impacts to noise resulting from implementation of the proposed project.

Mitigation Measures

N1

The following measures shall be implemented at the construction site to reduce the effects of construction noise on adjacent residences:

- Noise-generating activities at the construction sites or in areas adjacent to the construction sites associated with the project in any way shall generally be restricted to the hours of 7:00 a.m. to 7:00 p.m.
- Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.
- Unnecessary idling of internal combustion engines shall be strictly prohibited.
- Staging of construction equipment and all stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be staged as far as practicable from existing noise sensitive receptors.
- Utilize "quiet" air compressors and other stationary noise sources where technology exists.
- Control noise from construction workers' radios to the point where radio noise is not audible at existing residences bordering the project site.
- Notify adjacent residents to the project site of the construction schedule in writing.

XIV POPULATION & HOUSING

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	□	□	□	■
b. Would the project displace substantial numbers of people or existing housing, necessitating the construction of replacement housing elsewhere?	□	□	□	■

Environmental Setting

The Meadow Pointe water system serves approximately 175 people through 93 service connections. The service connections include 86 residential and seven industrial customers. The District is a community water system to the north of Meadow Pointe. The District's water system serves approximately 1,085 people through 401 metered service connections. The Bridge Arbor area would include nine parcels with 13 residences.

Population growth in the project area is planned for and regulated by the County's General Plan and zoning ordinance, described in the Land Use and Planning section of this document. A Growth Inducement Potential analysis is also provided earlier in this document.

Analysis

a. Would the project induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The project would not induce population growth. The mobile home park and northerly commercial uses are currently served by the Meadow Pointe water system. The overall project is intended to provide the existing Meadow Point water system with a safe and reliable water service as well as existing residents along Bridge Arbor. All of the parcels proposed for annexation and new water service are already developed, as described in the Growth Inducement Potential analysis.

The mobile home park could potentially be expanded in the future based on its zoning designation, General Plan designation and existing development density. However, the County has indicated that would require a major use permit application, requiring a project-specific environmental review and design of roadways and utilities. The parcel is within the General Plan Urban Growth Boundary so would have been included in the General Plan EIR's program analysis of traffic, public services, growth, housing, noise and utilities. The proposed project would not result in development of the remainder of the mobile home park parcel.

b. Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

No housing would be displaced by the project. The project is intended to provide the existing community with safe and reliable water service.

Cumulative Impacts

There are no adverse cumulative environmental impacts to population and housing resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to population and housing have been identified; therefore, no mitigation is required.

XV PUBLIC SERVICES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i. Fire protection?	□	□	□	■
ii. Police protection?	□	□	□	■
iii. Schools?	□	□	□	■
iv. Parks?	□	□	□	■
v. Other public facilities?	□	□	□	■

Environmental Setting

The project area falls entirely within the jurisdiction of the Northshore Fire Protection District (NSFPD), which covers 357 square miles of commercial, residential, and wildland properties. The NSFPD was created by consolidation of four fire agencies in 2006. The NSFPD service area has a permanent population of 10,000, with a larger population in the summer tourist season. NSFPD currently operates four fire stations.

Police protection is provided by the Lake County Sheriff. The Sheriff's Office is in Lakeport. Upper Lake area is patrolled as Beat 3B.

The project is in the Upper Lake Unified School District and offers elementary, middle and high school campuses in the community of Upper Lake. All three schools are located within the District service area and are provided water service.

Upper Lake Park, operated by Lake County, is located in the southeast portion of the project area. Upper Lake Park is within the District service area and is currently provided potable water service.

Analysis

a. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a.i. Fire protection?

The overall project would not have any negative effect on fire protection services. The project does not alter above ground conditions or access to/from the project area. The project would provide the benefit of increased water system reliability via a redundant water main to the water storage tanks as well as increase fire flows to existing fire hydrants in Upper Lake. Meadow Pointe and Bridge Arbor's new water distribution system would be provided with fire hydrants. These would be beneficial to fire protection.

a.ii. Police protection?

The project is intended to improve the existing water systems. The project would not alter demographics in the project area and would not impact police protection.

a.iii. Schools?

The project would improve the two existing water systems and is intended to serve the existing population. The projects would not be growth inducing and would not have a long-term impact to schools.

a.iv. Parks?

The project would continue to serve Upper Lake Park. The project would not otherwise impact parks.

a.v. Other public facilities?

The project would not impact other public facilities.

Cumulative Impacts

There are no adverse cumulative environmental impacts to public services resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to public services have been identified; therefore, no mitigation is required.

XVI RECREATION

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	□	□	□	■
b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	□	□	□	■

Environmental Setting

The nearest public park operated by Lake County is Upper Lake County Park, immediately east of Meadow Pointe mobile home park. The are large tracts of Bureau of Land Management property to the west of Upper Lake and Mendocino National Forest is located to the north of the project area. Both provide ample outdoor recreation opportunities. Public lands that could be used for recreation are shown on Figure XVI-1.

Analysis

a. Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

The overall project would improve the existing water systems and would not be growth inducing or increase use of local parks or other recreational facilities. The project would not impact any parks.

b. Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

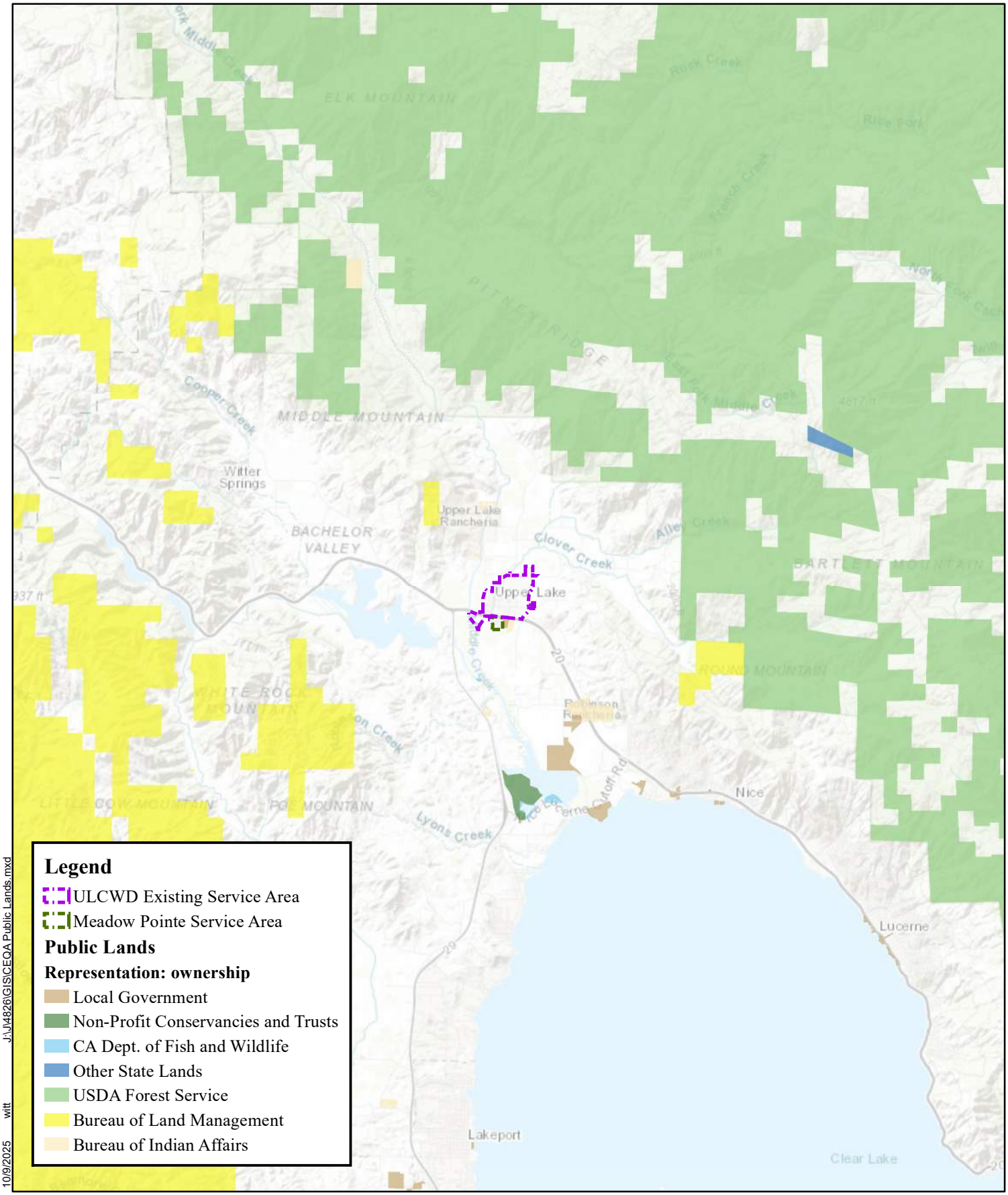
The project does not include recreational facilities or alter such facilities in any way.

Cumulative Impacts

There are no adverse cumulative environmental impacts to recreation resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to recreation have been identified; therefore, no mitigation is required.



J:\J4826\GIS\CEQA Public Lands.mxd

witt

10/9/2025

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Public Lands: CalFire (2017)

NORTH

0 0.5 1 2 Miles

Brelje & Race CONSULTING ENGINEERS
415 Aviation Blvd., Suite 120, Santa Rosa, CA 95403

FIGURE XVI-1

PUBLIC LANDS

ULCWD/MEADOW POINTE CONSOLIDATION
OCTOBER 2025

XVII TRANSPORTATION

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	□	□	□	■
b. Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	□	■	□	□
c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	□	□	□	■
d. Would the project result in inadequate emergency access?	□	■	□	□

Environmental Setting

The project area is in the Upper Lake area and Highway 20 is the major roadway through the community. Highway 20 provides access to Ukiah and Highway 101 to the west and Interstate 5 to the east. Highway 29 provides access to the south. Internal roads provide access to individual residences within the community.

Lake Transit provides a bus route (Route 1) that connects to Clearlake and Lakeport. Route 7 connects to Ukiah[28]. No other alternative transportation exists in the project area. There are few sidewalks and no official bike lanes.

Analysis

a. Would the project conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

The project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The project would primarily be located within roadways or shoulders but would not have a long-term impact on an applicable transportation plan, ordinance, or policy. The project is not growth inducing, serving existing residential units, and will not increase traffic or roadway use. Construction would temporarily disrupt traffic on local roadways but all roadways would be restored once construction is completed.

[28] https://laketransit.org/routes-schedules/

b. Would the project conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

The project does not conflict with and is not inconsistent with CEQA Guidelines § 15064.3, subdivision (b). The project would not increase vehicle trips to or from the project area. The project will provide clean drinking water to developed parcels that currently have MTBE contaminated water sources. Because the parcels to be served are already developed, the project will not generate additional traffic.

Where the project construction would impact roadways, roadway surfaces would be restored to existing conditions or improved upon project completion. Construction would reduce access to vehicle, pedestrian, and bike traffic within those locations. Standard traffic control mitigation provided in TT1 would reduce these impacts and ensure traffic flow and access to driveways when active construction is not underway. Portions of the project would be constructed in or adjacent to Highway 20 and require a Caltrans encroachment permit. Those portions would be subject to additional traffic control requirements, consistent with the encroachment permit.

c. Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The project would not increase design hazards. Road surfaces would be restored to existing conditions in the portions of the transmission main constructed in roadways. Encroachment permits from the County and Caltrans would ensure restored roadways do not increase hazards.

d. Would the project result in inadequate emergency access?

The project would not have any long-term impact to emergency access since roadways would be restored to existing conditions. Construction in roadways could impact emergency response during construction. Mitigation Measure TT2 requires the contractor to maintain emergency access at all times and would reduce such impact to less than significant.

Cumulative Impacts

There are no adverse cumulative environmental impacts to transportation/traffic resulting from implementation of the proposed project.

Mitigation Measures

TT1

The contractor shall develop and submit an appropriate Traffic Control Plan (TCP) in accordance with the California Manual of Uniform Traffic Control Devices (MUTCD) for review and approval by the District, County and Caltrans for all project elements that impact traffic circulation in respective jurisdictions. The TCP shall also include notifying adjacent businesses and residents of the construction schedule and when it will impact access. The TCP shall ensure through traffic and temporary driveway access during periods where active construction is not taking place.

TT2

The contractor shall provide advanced notice regarding timing, location, and the duration of construction activities to local emergency responders. The contractor shall ensure emergency responders can always have access through construction areas located in roadways.

XVIII TRIBAL CULTURAL RESOURCES

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	□	■	□	□
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.	□	■	□	□

REGULATORY SETTING

Assembly Bill 52 (AB52), the Native American Historic Resource Protection Act, sets forth a proactive approach intended to reduce the potential for delay and conflicts between Native American and development interests. AB52 established a formal consultation process for California Native American Tribes to be conducted with the CEQA process. All projects that file a notice of intent to adopt a mitigated negative declaration after July 1, 2016, are subject to AB52 which added tribal cultural resources (TCR) protection under CEQA. A TCR is defined as a site, feature, place, cultural landscape, sacred place, or object with cultural value to a California Native American tribe that is either included or eligible for inclusion in the California Register, or included in a local register of historical resources. A Native American Tribe or the lead agency, supported by substantial evidence, may choose at its discretion to treat a resource as a TCR. AB52 also mandates lead agencies to consult with tribes, if requested by the tribe, and sets the principles for conducting and concluding consultation.

CULTURAL SETTING

The project area occurs within the Habematolel Pomo of Upper Lake's traditional territory. The pre-contact, historic and recent cultural setting associated with the Habematolel Pomo of Upper Lake is summarized in the Cultural Resources section of this document. The Habematolel Pomo of Upper Lake are an integral part of the overall existing community and their input on this section of the document has been essential.

Analysis

a. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

a.i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?

As indicated in the Cultural Resources section, Barrow & Associates prepared a Cultural Resources Study for the project area in 2025. Three known archaeological sites are within the project's APE and are described in that section. Standard archeological accidental discovery mitigation (CR1) is provided. The recommendation for additional invasive subsurface investigation was not pursued due to concerns raised during tribal consultation. Given existing data gaps and the Habematolel Pomo of Upper Lake's commitment to preserving what is left of the site and the cultural connection, it was determined that further disturbance was not appropriate at this time. This is discussed further below."

a.ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Known archaeological resources were described in the Cultural Resources section of this document, as indicated above.

As part of the AB52 tribal consultation process, project information was sent via certified mail to the following tribes by the District on January 21, 2025:

- Big Valley Band of Pomo Indians of the Big Valley Rancheria
- Cahto Tribe
- Cloverdale Rancheria of Pomo Indians
- Dry Creek Rancheria of Pomo Indians
- Elem Indian Colony Pomo Tribe
- Estom Yumeka Maidu Tribe of the Enterprise Rancheria
- Guidiville Indian Rancheria
- Habematolel Pomo of Upper Lake
- Hopland Band of Pomo Indians
- Koi Nation of Northern California
- Manchester Band of Pomo Indians of the Manchester Rancheria
- Middletown Rancheria of Pomo Indians of California
- Noyo River Indian Community
- Pinoleville Pomo Nation
- Potter Valley Tribe
- Redwood Valley or Little River Band of Pomo Indians
- Robinson Rancheria of Pomo Indians
- Round Valley Reservation/ Covelo Indian Community

- Scotts Valley Band of Pomo
- Sherwood Valley Rancheria of Pomo
- Yokayo Tribe

The Middletown Rancheria of Pomo Indians and the Sherwood Valley Rancheria of Pomo responded that the project is outside of their traditional territory. The letters to the Elem Indian Colony Pomo Tribe and the Yokayo Tribe were returned as undeliverable. A follow-up email was sent to the listed tribes on February 10, 2025. On February 2, 2025, the Habematolel Pomo of Upper Lake issued a letter indicating that the project is in their traditional territory and could impact known and unknown TCRs. No responses from other tribes were received.

Based on the Habematolel Pomo of Upper Lake's request for consultation, the District and the Habematolel Pomo of Upper Lake initiated government to government consultation with Mr. Robert Geary, Tribal Historic Preservation Office. Additionally, the Habematolel Pomo of Upper Lake participated in the archaeological survey and preparation of the Cultural Resources Report. Consultation milestones are summarized below:

- February 14 and 28, 2025: Ms. Barrow met with Tribal representatives to review the project locations for potential TCRs and review potential impacts to known TCRs and cultural resources. It was agreed that the draft Cultural Resources Report would be submitted to the Habematolel Pomo of Upper Lake for review when completed. It was also agreed that Cultural Sensitivity Training for all project personnel would occur prior to any ground disturbing activities and be required for all personnel present on-site throughout the duration of the project.
- April 30, 2025: The draft Cultural Resources Report was submitted to the Habematolel Pomo of Upper Lake for review.
- May 15, 2025: A brief meeting was held with Mr. Geary regarding the draft Cultural Resources Report regarding refinement of some of the recommendations.
- June 10, 2025: A consultation meeting was held with the Mr. Geary to review comments on the draft Cultural Resources Report. Mr. Geary expressed a desire to not engage in additional invasive subsurface archaeological investigation and that ground disturbing construction activities be subject to tribal monitoring under agreement with the District and implement the Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Habematolel Pomo of Upper Lake (Treatment Protocol). It was agreed that potential reburial sites would be identified for any artifacts discovered during construction prior to public review of the CEQA document.
- June 27, 2025: The revised Cultural Resources Report was submitted to Mr. Geary for review. A preliminary map of potential reburial locations was submitted for review. Note: preliminary locations were reviewed with the District on July 10, 2025, to ensure feasibility to implement prior to submittal to Mr. Geary.
- July 22, 2025: A consultation meeting was held with Mr. Geary to review the proposed reburial sites. Modifications were made to the locations, and a revised map was submitted to Mr. Geary for review with the Tribal Council. It was agreed that additional recovery and handling methodologies would be added to Treatment Protocol.
- September 4, 2025: A consultation meeting was held with Mr. Geary to review the Habematolel Pomo of Upper Lake's Tribal Council comments on the proposed reburial site. Final sites were established, the map was revised and sent to Mr. Geary on September 5, 2025. Additionally, Mr. Geary approved the minor additions to the Treatment Protocol. It was also agreed that Mr. Geary would be provided drafts of the Cultural Resources and

Tribal Cultural Resources sections to ensure confidentiality of locations is maintained and that Habematolel Pomo of Upper Lake's concerns are appropriately addressed.

- October 3, 2025: Mr. Geary indicated that the CEQA document adequately reflects the consultation.

The Habematolel Pomo of Upper Lake are experienced with the sensitivity of the study area and have great concerns for the impact this project could have. The study area has a high sensitivity for TCRs and because of this, the Habematolel Pomo of Upper Lake would like to monitor all project elements that require ground-disturbing activities. Several mitigation measures are included here to meet the mitigation approach established during consultation. They include tribal monitoring (TCR1), implementation of the Treatment Protocol (TCR2), implementation of reburial sites (TCR3), and the requirement that any new archaeological sites discovered be recorded (TCR4).

With the incorporation of the agreed-upon measures, procedures, and mitigation strategies, the Habematolel Pomo of Upper Lake concurs that the project will reduce potential impacts and provide appropriate protection for Tribal Cultural Resources that may remain on-site.

Cumulative Impacts

There are no adverse cumulative environmental impacts to tribal cultural resources resulting from implementation of the proposed project with the included mitigation measures.

Mitigation Measures

TCR1

All ground disturbing construction associated with the project shall be monitored by a representative(s) of the Habematolel Pomo of Upper Lake. Prior to commencement of any project construction for the District's portion of the project, the District shall enter into the Habematolel Pomo of Upper Lake's Tribal Monitoring Agreement. Prior to commencement of any project construction for Meadow Pointe's portion of the project, the State Water Resources Control Board, as a Responsible Agency under CEQA, shall ensure that the Tribal Monitoring Agreement is in place with the appropriate party. Cultural Sensitivity Training for all project personnel would occur prior to any ground disturbing activities and be required for all personnel present on-site throughout the duration of the project.

TCR2

During the Tribal Monitoring, if archaeological resources or TCRs are discovered by the Tribal Monitor, any member of the construction crew, or the archeologist, the measures contained in the *Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Habematolel Pomo of Upper Lake* shall be implemented as part of the Tribal Monitoring Agreement. For confidentiality, the Treatment Protocol, as modified for the project, is maintained by the Habematolel Pomo of Upper Lake and contained in the Cultural Resources Report.

TCR3

If TCRs are discovered during construction that must be relocated to accommodate the project, reburial locations were generally established during consultation. Those locations are indicated on an exhibit titled "Area of Potential Effect – Potential Reburial Locations" dated September 5, 2025, contained in the Cultural Resources Report. All selected reburial sites would be approximately five feet by five feet in size. The exact location would be selected in consultation with the Habematolel Pomo of Upper Lake to not encumber use or development of the property. All reburial locations shall be documented on appropriate DPR523 forms and these forms shall be submitted to the Northwestern Information Center (NWIC) within 90 days of completion of all reburials. the project archaeologists shall submit a Scared Lands File (SLF) to the Native American Heritage Commission (NAHC) on behalf of the Habematolel Pomo of Upper Lake for the protection of the reburial locations and for protection of those reburied TCRs. Each site shall be provided with a cultural resources easement and fenced.

TCR4

If any new archaeological sites are found during the course of the project, they shall be documented on appropriate DPR523 forms and submitted to the Northwest Information Center (NWIC) within 90 days of completion of the project. Any cultural resources documents generated by this project shall be submitted to the NWIC within 90 days of completion of the report.

XIX UTILITIES & SERVICE SYSTEMS

	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	□	□	□	■
b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	□	□	□	■
c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	□	□	□	■
d. Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	□	□	□	■
e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	□	□	□	■

Environmental Setting

The District and the Meadow Pointe water system currently provide water service to the majority of the project area. The major Lake County landfill is the South Lake Refuse and Recycling Center, located in the City of Clearlake. Wastewater treatment in the project area is provided by Northwest Regional Wastewater System. Electric power is provided by PG&E via above ground transmission. There is no natural gas distribution in the area.

Analysis

a. Would the project require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?

The project would not require or result in the relocation or construction of new or expanded wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. The project would include water system improvements in existing water service areas and are subject to environmental review in this document. The project would not be growth inducing and would not increase demand for utilities in the service areas.

b. Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The overall project is intended rectify the current MTBE contamination in the Meadow Pointe and Bridge Arbor wells. Both project areas would be provided water service by the District. Improvements to the District's existing water system will be required to provide the additional water. However, the project would not be growth inducing and would not increase overall demand for water in the project area as parcels to be served are already developed and already utilizing groundwater. The project would not include new water sources, and is primarily limited to transmission improvements. Existing water supplies are sufficient to meet existing demands and no new entitlements are required.

c. Would the project result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

The project would not alter the existing use or capacity of the existing wastewater collection system in the project area. Because the project is not growth inducting, it would not result in an increase in wastewater flows.

d. Would the project generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

No increase in solid waste generation would occur associated with the project and it would not increase solid waste demands or impair attainment of solid waste reduction goals. Any demolition materials or spoils would be processed according to state and local regulations.

e. Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would comply with federal, state and local statutes and regulations related to solid waste.

Cumulative Impacts

There are no adverse cumulative environmental impacts to utilities and service systems resulting from implementation of the proposed project.

Mitigation Measures

No adverse environmental impacts to utilities and service systems have been identified; therefore, no mitigation is required.

XX WILDFIRE

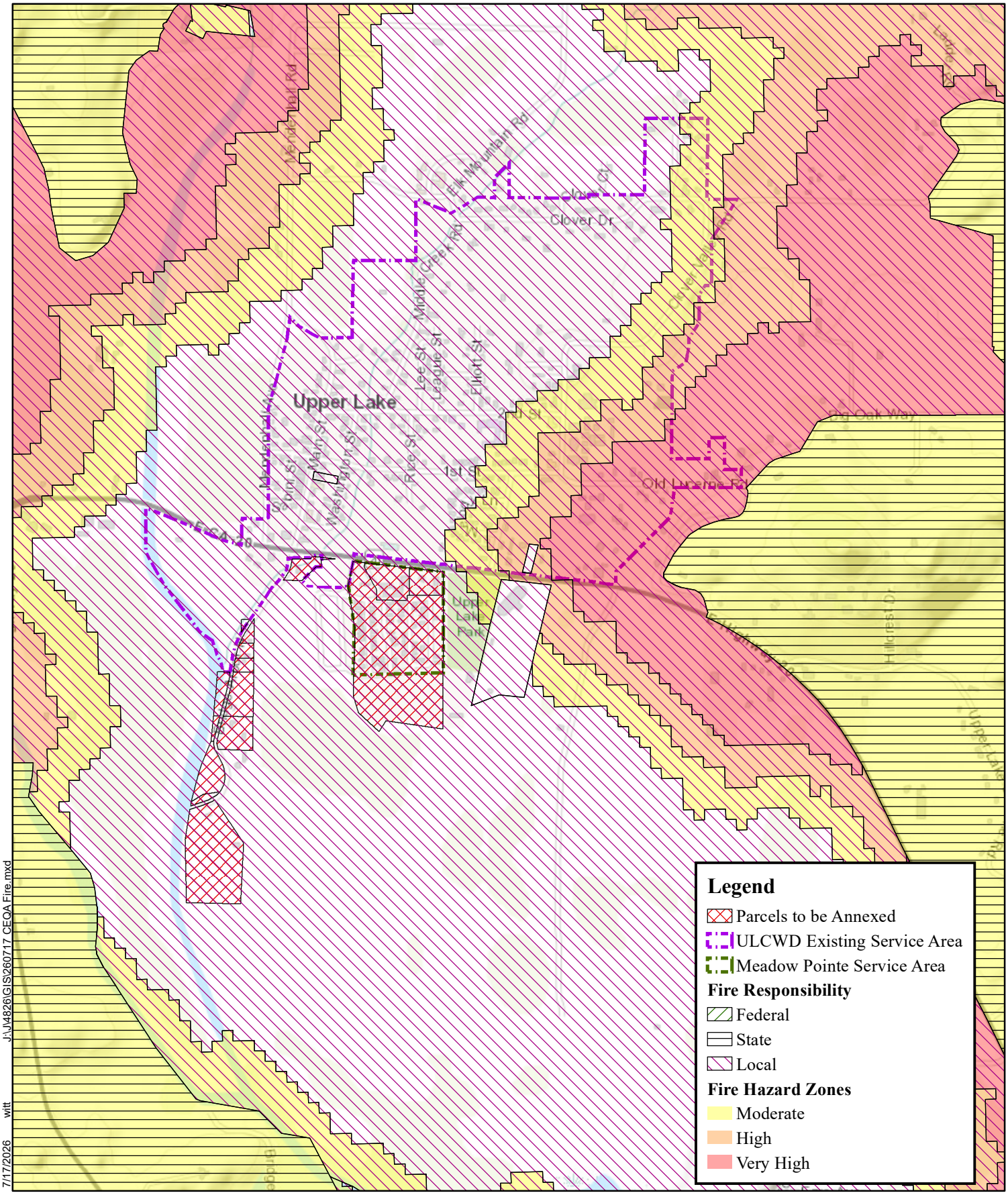
If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:	Potentially significant impact	Less than significant impact with mitigation incorporation	Less than significant impact	No impact
a. Substantially impair an adopted emergency response plan or emergency evacuation plan?	□	■	□	□
b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	□	□	□	■
c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	□	□	□	■
d. Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	□	□	□	■

Environmental Setting

The project area is primarily designated as a local fire responsibility area and is located entirely outside of the very high fire hazard zone, as shown on Figure XX-1. The North Shore Fire Protection District operates one fire station located in the community of Upper Lake.

Lake County has been subject to multiple wildfires each year over the last several years. More than half of the county has burned since 2012. Wildfires greater than 500 acres in the project area reported by CalFire since 2000 are shown on Figure XX-2.

The entire project area is included in the County's 2025 Emergency Operations Plan. Mutual aid and response agreements exist between all the local fire protection districts and are coordinated by the Office of Emergency Services during large-scale disasters, including wildfire.



J:\J4826\GIS\260717 CEQA Fire.mxd

witt

7/17/2026

Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Fire Hazard Zone: CalFire
Responsibility Area: CalFire

NORTH

0 295 590 1,180 Feet

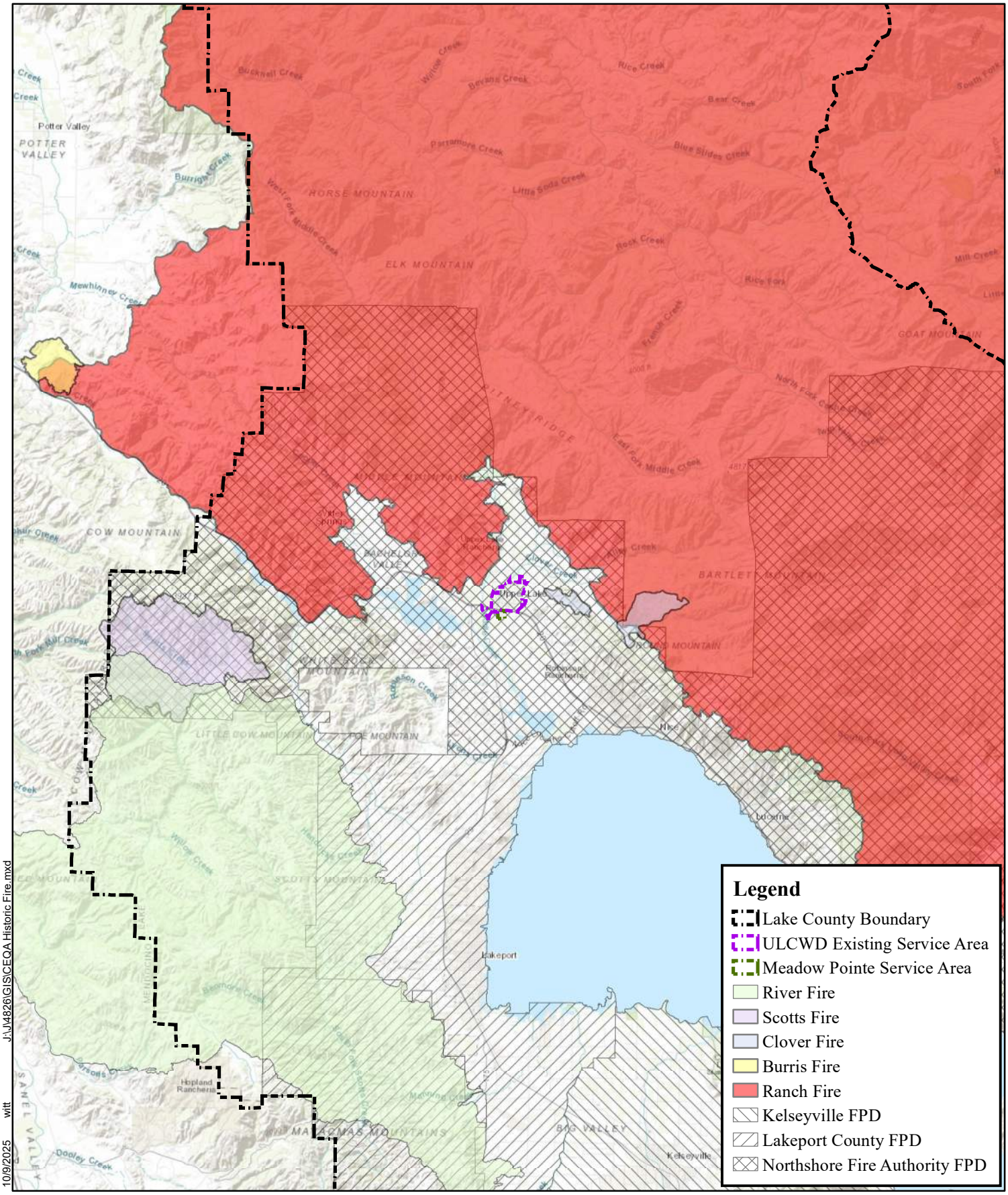
Brelje & Race
CONSULTING ENGINEERS
475 Aviation Blvd. Suite 120, Santa Rosa, CA 95403

FIGURE XX-1

FIRE HAZARD ZONE

ULCWD/MEADOW POINTE CONSOLIDATION

JULY 2026



Coordinate System: NAD 1983 StatePlane California II FIPS 0402 Feet
Projection: Lambert Conformal Conic
Datum: North American 1983
Units: Foot US

Data Source Information:
Historic Fires: CalFire (2018)

NORTH

0 0.75 1.5 3 Miles

Brelje & Race
CONSULTING ENGINEERS
415 Aviation Blvd., Suite 120, Santa Rosa, CA 95403

FIGURE XX-2
POST 2000 WILDFIRES
OVER 500 ACRES

ULCWD/MEADOW POINTE
CONSOLIDATION
OCTOBER 2025

Analysis

a. Would the project substantially impair an adopted emergency response plan or emergency evacuation plan?

The project would not substantially impair an adopted emergency response plan or emergency evacuation plan. The overall project would bolster water availability across the existing water service area by improving water main reliability, adding redundancy to storage, and increasing the number of available fire hydrants, improving firefighting capacities within the service acre. The project would not have any long-term impact to emergency access since roadways would be restored to existing conditions. Construction in roadways could impact emergency response during construction due to equipment or trenches reducing access. Mitigation Measure TT2, in the Transportation section, requires the contractor to maintain emergency access and would reduce such impact to less than significant.

b. Would the project due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?

The project modifies existing infrastructure and includes construction of below ground water mains to improve water service within the project area. The project would improve firefighting capacity by increasing water reliability through distribution improvements and increasing water availability for firefighting via fire hydrants.

c. Would the project require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project would modify existing infrastructure, including construction of below ground water mains to improve water service within the project areas. The project would not require the installation or maintenance of associated infrastructure that may exacerbate fire risk. The project would improve firefighting ability by increasing water system reliability and water available via fire hydrants.

d. Would the project expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would not alter existing risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. The project would increase firefighting capabilities in the area.

Cumulative Impacts

There are no adverse cumulative environmental impacts from wildfire resulting from implementation of the proposed project.

Mitigation Measures

Please see Mitigation Measure TT1 contained in the Traffic section.

XXI MANDATORY FINDINGS OF SIGNIFICANCE

a. Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

With implementation of the mitigation measures provided in this document, the project is not expected to have a significant adverse impact on the habitat of any plant or animal species, humans or historic or prehistoric resources. Furthermore, the project would not substantially degrade the environment or reduce the level of an endangered or otherwise important plant or animal population below self-sustaining levels. This impact is considered less than significant with incorporation of the proposed mitigation measures.

b. Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Implementation of the proposed mitigation measures would reduce impacts to less than significant levels. Because no impact is considered to be individually significant, there would be no contribution to a significant cumulative effect and there are no similar projects in the project area that would result in cumulatively considerable effects. Therefore, this impact is less than significant with incorporation of the proposed mitigation measures.

c. Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The overall project is specifically intended to improve existing drinking water systems that serve the existing communities. With implementation of the mitigation measures provided in this document, the project is not expected to cause substantial adverse effects on human beings either directly or indirectly.

DETERMINATION

On the basis of this initial evaluation:

- ☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ■ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature	*Date*
Rachelle Henry, General Manger	For:
Printed Name	Upper Lake County Water District

DOCUMENT PREPARATION AND SOURCES

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Geologic Map of California. California Geological Survey 150th Anniversary Edition. Charles W. Jennings, with modifications by Carlos Gutierrez, William Bryant, George Saucedo and Chris Wills. 2010.

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Lake County Important Farmland 2020. California Department of Conservation Farmland Mapping and Monitoring Program. 2020.

Lake County Aggregate Resources Management Plan. County of Lake. November 19, 1992.

Lake County Airport Land Use Compatibility Plan

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Meadow Pointe/Upper Lake County Water District Consolidation Preliminary Engineering Report. TA Work Plan No. 6330-A. Brelje & Race. January 4, 2024. Addendum to Preliminary Engineering Report. January 10, 2025.

<u>Websites</u>

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https://www.hcd.ca.gov/policy-research/docs/adu_december_2020_handbook.pdf

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https://www.arb.ca.gov/cc/inventory/pubs/reports/2000_2014/ghg_inventory_trends_00-14_20160617.pdf

www.airquality.org/Businesses/CEQA-Land-Use-Planning/CEQA-Guidance-Tools

http://www.airquality.org/LandUseTransportation/Documents/Ch4+Ch6OperationalScreening4-2018.pdf

https://caleemod.com/model

https://laketransit.org/routes-schedules/

Prepared by:

Justin Witt—Environmental Planner

APPENDIX A: MITIGATION MONITORING AND REPORTING PLAN

Pursuant to Section 21081.6 of the State CEQA Guidelines1, the mitigation measures listed in this Mitigation Monitoring and Reporting Plan (MMRP) are to be implemented as part of the proposed project. The MMRP identifies the time at which each mitigation measure is to be implemented and the person or entity responsible for implementation. The initials of the designated responsible person will indicate completion of their portion of the mitigation measure. The Upper Lake County Water District's (ULCWD) General Manager's signature on the Certification of Compliance will indicate complete implementation of the MMRP for the ULCWD's portion of the project.

The mitigation measures included in the MMRP are considered conditions of approval of the proposed project. The ULCWD agrees to implement the mitigation measures proposed in the MMRP. Implementation of the mitigation measures included in the MMRP is expected to avoid, minimize, rectify, reduce, or compensate potentially significant impacts to a less than significant level.

TIME OF IMPLEMENTATION

Project Design: The mitigation measure will be incorporated into the project conditions of approval prior to approving the project.

Preconstruction: The mitigation measure will be implemented prior to construction.

Construction: The mitigation measure will be implemented during construction.

Post Construction: The mitigation measure will be implemented after construction is complete.

RESPONSIBLE PERSONS AND DEPARTMENTS

The ULCWD as Lead Agency will be responsible for ensuring overall implementation of the MMRP through oversight of the ULCWD's compliance with the MMRP. The ULCWD's General Manager will sign off on the mitigation measures included in the MMRP associated with the ULCWD's portion of the project. Periodically, other ULCWD staff, consultants or regulatory agencies will be involved in the implementation of specific mitigation measures. In these instances, the staff, department, or agency will be identified in the MMRP.

Portions of the project occurring on the Meadow Pointe parcels will be conducted by an entity other than ULCWD. The State Water Resources Control Board, working with their consultant(s), will ensure that applicable mitigation measures are incorporated into that project's plans and specifications as part of the funding application.

CERTIFICATION OF COMPLIANCE

The ULCWD will be responsible for providing signatures on the Certification of Compliance for ULCWD's portion of the project. The Certification of Compliance is a double-check to ensure that the MMRP was fully implemented.

RECORD KEEPING

The ULCWD's General Manager will maintain the records of the MMRP. When the MMRP is fully implemented, the original signed copy will be maintained by the ULCWD.

1 California Code of Regulations Title 14.

CERTIFICATION OF COMPLIANCE FORM

Complete the Certification of Compliance after mitigation measures have all been initialed. Use this Certification of Compliance to ensure the full implementation of each mitigation measure.

PROJECT DESIGN

The ULCWD's General Manager has reviewed the project design, the plans, and the contract special provisions to verify that designated mitigation measures have been incorporated.

Signature & title: _____ Date: _____

PRECONSTRUCTION

The ULCWD's General Manager has reviewed the project design, the plans, and the contract special provisions to verify that designated preconstruction mitigation measures have been implemented prior to commencing construction.

Signature & title: _____ Date: _____

CONSTRUCTION

The ULCWD's General Manager has verified that designated mitigation measures were implemented during construction.

Signature & title: _____ Date: _____

AIR QUALITY

Mitigation Measure AQ1

The following best management practices, as described by the Yolo-Solano Air Quality Management District 2013 Handbook for Assessing and Mitigating Air Quality Impacts shall be implemented during construction to minimize fugitive dust and emissions:

1. Water all active construction sites at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.

2. Haul trucks shall maintain at least 2 feet of freeboard.

3. Cover all trucks hauling dirt, sand, or loose materials.

4. Plant vegetative ground cover (hydroseed with native mix) in disturbed areas as soon as possible.

5. Cover inactive storage piles.

6. Sweep streets if visible soil material is carried out from the construction site.

7. Treat accesses to a distance of 100 feet from the paved road with a 6 to 12 inch layer of wood chips, mulch, or gravel.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that Mitigation Measure AQ1 is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

BIOLOGICAL RESOURCES

Mitigation Measure BIO1

To avoid impacts to foothill yellow-legged frog, the following measures shall be implemented:

1. A pre-construction survey for special status amphibians shall be conducted prior to the initiation of Project activities within 48 hours of the start of ground disturbance activities. Surveys are to be conducted by an approved qualified biologist with experience surveying for each species. If any species is found on the project area, it should be allowed to leave the area on its own. If the animal does not leave the area on its own, CDFW should be contacted.

2. For work occurring outside paved areas, a qualified biologist should first survey the area each day that work is occurring to ensure FYLF are not present. Alternatively, wildlife exclusion fencing may be installed between sensitive habitats and the project area to prevent animals from entering the work area (where appropriate under the supervision of a qualified biologist to ensure impacts to sensitive habitat and/or species do not occur during fence installation).

3. Trenches and holes should be covered and inspected daily by the qualified biologist, or individual appropriately trained by the qualified biologist, for stranded animals. Trenches and holes deeper than one foot should contain escape ramps at a maximum slope of 2:1 to allow trapped animals to escape.

4. Plastic monofilament netting (erosion control matting) is prohibited at this location due to the potential to entangle or trap FYLF (or NWPT). Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that appropriate components of the mitigation measure are implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure BIO2

To avoid potentially significant impacts to nesting birds, including Nuttall's woodpecker, oak titmouse, Bullock's oriole, and other common nesting birds and raptors, noise-generating activities exceeding ambient conditions should be initiated outside the nesting bird season either before March 1 or after August

31. If work must be initiated during the nesting season, the following avoidance and minimization measures are recommended:

1. A pre-construction nesting bird (both passerine and raptor) survey of suitable nesting habitat within the project area and/or adjacent habitats should be performed within 10 days of groundbreaking. If no nesting birds are observed, no further action is required. A follow up survey is required if a stoppage in work occurs for longer than 10 days between March 1 and July 1; initiation of new nests is not anticipated after July

1.

2. If active bird nests (passerine and/or raptor) are observed during the pre-construction survey, a disturbance-free buffer zone shall be established around the nest tree(s) until the young have fledged or the nest has naturally failed or been predated, as determined by a qualified biologist. The radius of the required buffer zone can vary depending on the species and status of the nest. The dimension of any required buffer zone should be determined by a qualified biologist.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the avoidance or preconstruction surveys are implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure BIO3

A pre-construction nesting bird survey should be performed to detect any potential tricolored blackbird colonies in the vicinity of the project area. This survey should be performed during the tricolored blackbird season in April, during the active colony formation and/or nest building phases when colonies are most easily identifiable. If a tricolored blackbird colony is detected, a minimum 60-foot (up to 300-foot as needed to incorporate nearby foraging habitat) disturbance-free buffer zone shall be established around the colony, until all young have fledged and the colony is dispersed.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the avoidance or preconstruction surveys are implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure BIO4

To avoid and minimize potentially significant impacts to potentially jurisdictional aquatic features and their associated riparian habitat (arroyo willow thickets) resulting from incidental discharge during project construction, work should be conducted during the dry season and construction best management practices (BMPs) should be implemented. This includes implementing an erosion control plan, designating egress/ingress and staging within existing disturbed/developed areas outside of the riparian zone, setting up exclusion zones, and ensuring thorough cleanup following construction closeout. Implementation of these

measures would ensure that potential effects to Middle Creek and Clover Creek and their associated riparian habitat are less than significant.

When the pipeline crossing for Clover Creek is designed and prior to construction, ULCWD shall consult with CDFW and Regional Board regarding any potential impacts to regulatory waters or riparian habitat. If required, permits shall be obtained and permit conditions implemented prior to or during construction.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the avoidance or protocol level surveys and resulting recommendations are implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

CULTURAL RESOURCES

Mitigation Measure CR1

As stipulated in CCR § 15064.5 (f) of the CEQA guidelines, if potential historical resources are uncovered, during project-related activities, then all ground-disturbing work shall be halted immediately until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards can evaluate the find. Prehistoric archaeological site indicators include obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones, and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire-affected stones. Historic period site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations and discrete trash deposits (e.g., wells, privy pits, dumps). Additionally, the Habematolel Pomo of Upper Lake shall be contacted immediately.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure CR2

As stipulated in CCR § 15064.5(d) through (e), if human remains are encountered at any point during the project, all ground-disturbing activities must cease within a minimum of 50 feet of the find while the county coroner is contacted to confirm whether the remains are California Native American remains. If the coroner determines the remains are California Native American, the coroner will contact the NAHC. The NAHC will identify the person or persons believed to be most likely descended (MLD) from the deceased California Native American. The MLD will make recommendations regarding the treatment of the remains with appropriate dignity. Additionally, the Habematolel Pomo of Upper Lake shall be contacted immediately.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

GEOLOGY & SOILS

Mitigation Measure GS1

The project plans and specifications shall provide that in the event paleontological site indicators are unearthed (vertebrate fossils, or noteworthy occurrences of invertebrate or plant fossils) during grading, excavation and/or trenching, all ground disturbing work in the vicinity of the discovery shall cease and all exposed materials shall be left in place. After cessation of excavation, the contractor shall immediately contact ULCWD. ULCWD shall contact a qualified professional geologist or paleontologist immediately after the find. Such consultant shall conduct an evaluation of significance of the site and assess the necessity for mitigation. The contractor shall not resume construction activities until authorization to proceed is received from ULCWD.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

HAZARDS & HAZARDOUS MATERIALS

Mitigation Measure HM1

The contractor shall be required to follow the provisions of § 5163 through 5167 of the General Industry Safety Orders (California Code of Regulations, Title 8) to protect the project area from being contaminated by accidental release of any hazardous materials.

In general, the Contractor shall maintain awareness of potential signs of soil and groundwater contamination throughout the project limits and shall notify the ULCWD immediately upon discovery of any potential soil or groundwater contamination.

If hazardous materials are encountered during construction or occur as a result of an accidental spill, the contractor shall halt construction immediately, notify the ULCWD, and implement remediation in accordance with the project specifications and applicable requirements of the Regional Board. Disposal of all hazardous materials shall be in compliance with current California hazardous waste disposal laws.

The contractor shall be provided the location of all known LUST sites in the project area. The contractor shall be required to prepare a plan for construction near and adjacent to known hazardous materials sites where there is potential to encounter contaminated soils or groundwater and that plan shall be reviewed and approved by the construction manager. The contractor shall have personal on-site experienced with identifying and handling hydrocarbon-contaminated soils. In the event evidence of hydrocarbon-contaminated soils are identified, the contractor shall contact the construction manager and the Reginal Board. Work in that area shall cease until the soils handling plan can be implemented.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

NOISE

Mitigation Measure N1

The following measures shall be implemented at the construction site to reduce the effects of construction noise on adjacent residences:

1. Noise-generating activities at the construction sites or in areas adjacent to the construction sites associated with the project in any way shall generally be restricted to the hours of 7:00 a.m. to 7:00 p.m.

2. Equip all internal combustion engine driven equipment with intake and exhaust mufflers which are in good condition and appropriate for the equipment.

3. Unnecessary idling of internal combustion engines shall be strictly prohibited.

4. Staging of construction equipment and all stationary noise-generating construction equipment, such as air compressors and portable power generators, shall be staged as far as practicable from existing noise sensitive receptors.

5. Utilize "quiet" air compressors and other stationary noise sources where technology exists.

6. Control noise from construction workers' radios to the point where radio noise is not audible at existing residences bordering the project site.

7. Notify adjacent residents to the project site of the construction schedule in writing.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the noticing is implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

TRANSPORTATION

Mitigation Measure TT1

The contractor shall develop and submit an appropriate Traffic Control Plan (TCP) in accordance with the California Manual of Uniform Traffic Control Devices (MUTCD) for review and approval by the ULCWD, County and Caltrans for all project elements that impact traffic circulation in respective jurisdictions. The TCP shall also include notifying adjacent businesses and residents of the construction schedule and when it will impact access. The TCP shall ensure through traffic and temporary driveway access during periods where active construction is not taking place.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure TT2

The contractor shall provide advanced notice regarding timing, location, and the duration of construction activities to local emergency responders. The contractor shall ensure emergency responders can always have access through construction areas located in roadways.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the noticing is implemented prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager or construction inspector shall ensure that the mitigation measure is being implemented during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

TRIBAL CULTURAL RESOURCES

Mitigation Measure TCR1

All ground disturbing construction associated with the project shall be monitored by a representative(s) of the Habematolel Pomo of Upper Lake. Prior to commencement of any project construction for the ULCWD's portion of the project, the ULCWD shall enter into the Habematolel Pomo of Upper Lake's Tribal Monitoring Agreement. Prior to commencement of any project construction for Meadow Pointe's portion of the project, the State Water Resources Control Board, as a Responsible Agency under CEQA, shall ensure that the Tribal Monitoring Agreement is in place with the appropriate party. Cultural Sensitivity Training for all project personnel would occur prior to any ground disturbing activities and be required for all personnel present on-site throughout the duration of the project.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Preconstruction: The ULCWD's General Manager will verify that the Tribal Monitoring Agreement is approved prior to commencing construction.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager will follow the Tribal Monitoring Agreement and Tribal Monitor's direction pertaining to tribal cultural resources during construction. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure TCR2

During the Tribal Monitoring, if archaeological resources or TCRs are discovered by the Tribal Monitor, any member of the construction crew, or the archeologist, the measures contained in the Treatment Protocol for Handling Human Remains and Cultural Items Affiliated with the Habematolel Pomo of Upper Lake shall be implemented as part of the Tribal Monitoring Agreement. For confidentiality, the Treatment Protocol, as modified for the project, is maintained by the Habematolel Pomo of Upper Lake and contained in the Cultural Resources Report.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager will follow the Tribal Monitor's direction pertaining to tribal cultural resources during construction and adhere to the Treatment Protocol. Failure to comply shall result in issuance of a stop work order until corrective action has been taken.

Initials: _____ Date: _____

Mitigation Measure TCR3

If TCRs are discovered during construction that must be relocated to accommodate the project, reburial locations were generally established during consultation. Those locations are indicated on an exhibit titled "Area of Potential Effect – Potential Reburial Locations" dated September 5, 2025, contained in the Cultural Resources Report. All selected reburial sites would be approximately five feet by five feet in size. The exact location would be selected in consultation with the Habematolel Pomo of Upper Lake to not encumber use or development of the property. All reburial locations shall be documented on appropriate DPR523 forms and these forms shall be submitted to the Northwestern Information Center (NWIC) within 90 days of completion of all reburials. the project archaeologists shall submit a Scared Lands File (SLF) to the Native American Heritage Commission (NAHC) on behalf of the Habematolel Pomo of Upper Lake for the protection of the reburial locations and for protection of those reburied TCRs. Each site shall be provided with a cultural resources easement and fenced.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Construction: The ULCWD's General Manager will work with the Tribe to establish reburial locations, as indicated.

Initials: _____ Date: _____

Post Construction: The ULCWD's General Manager will verify documentation has been completed, that specified easement(s) are established and fenced, as required.

Initials: _____ Date: _____

Mitigation Measure TCR4

If any new archaeological sites are found during the course of the project, they shall be documented on appropriate DPR523 forms and submitted to the Northwest Information Center (NWIC) within 90 days of completion of the project. Any cultural resources documents generated by this project shall be submitted to the NWIC within 90 days of completion of the report.

IMPLEMENTATION & MONITORING

Project Design: The ULCWD's General Manager will verify that the mitigation measure is incorporated into the project plans and specification prior to issuing final project approvals.

Initials: _____ Date: _____

Post Construction: The ULCWD's General Manager will verify that required documentation has been completed.

Initials: _____ Date: _____